ICOM

SERVICE MANUAL

HF/50 MHz ALL BAND
LINEAR AMPLIFIER

IC-PW1

Icom Inc.

INTRODUCTION

This service manual describes the latest service information for the IC-PW1 HF/50 MHz ALL BAND LINEAR AMPLIFIER at the time of publication.

MODEL	VERSION	SYMBOL
IC-PW1	U.S.A.	USA
	Europe	EUR
	Europe-1	EUR-1

To upgrade quality, all electrical or mechanical parts and internal circuits are subject to change without notice or obligation.

DANGER

HIGH VOLTAGE! NEVER touch the antenna connector or the power supply section in the linear amplifier while connecting the IC-PW1 to an AC outlet.

NEVER carry the linear amplifier by yourself. At least two persons must carry the linear amplifier since it weights approx. 25 kg (55.12 lb).

NEVER expose the IC-PW1 to rain or moisture since fire or shock hazard could occur.

NEVER touch the IC-PW1 with metal strips, wire, etc. These materials may cause fires and electric shocks.



ORDERING PARTS

Be sure to include the following four points when ordering replacement parts:

1. 10-digit order numbers
2. Component part number and name
3. Equipment model name and unit name
4. Quantity required

<SAMPLE ORDER>

1140003830	S.IC	TC4W66F	IC-PW1	MAIN UNIT	1 piece
8810003160	SET Screw	3 × 6 ZK	IC-PW1	CHASSIS	6 pieces

Addresses are provided on the inside back cover for your convenience.

REPAIR NOTES

1. Make sure a problem is internal before disassembling the linear amplifier or the remote controller.
2. **DO NOT** open the linear amplifier or the remote controller until the linear amplifier is disconnected from its power source.
3. **DO NOT** force any of the variable components. Turn them slowly and smoothly.
4. **DO NOT** short any circuits or electronic parts. An insulated tuning tool **MUST** be used for all adjustments.
5. **DO NOT** keep power ON for a long time when the linear amplifier is defective.
6. **READ** the instructions of test equipment thoroughly before connecting equipment to the linear amplifier.

TABLE OF CONTENTS

SECTION 1 SPECIFICATIONS

■ GENERAL

- Frequency range : 1.800–1.999 MHz
3.500–3.999 MHz
4.630 MHz
7.000–7.300 MHz
10.100–10.150 MHz
14.000–14.350 MHz
18.068–18.168 MHz
21.000–21.450 MHz
24.890–24.990 MHz*[1]
28.000–29.700 MHz*[1]
50.000–54.000 MHz
*[1]The USA version can only be used the antenna tuner on the 24–28 MHz bands.
- Duty cycle : Full duty
- Input connector : SO-239 × 2 (50 Ω)
- Output connector : SO-239 × 4 (50 Ω)
- Power supply voltage : 90 V–132 V AC or 180 V–264 V AC
(single-phase; 50/60 Hz)
- Usable temperature range : –10 ˚C to +40 ˚C; +14 ˚F to +104 ˚F
- Dimensions (Projections not included) : Linear amplifier 350(W)×265(H)×375(D) mm; 13.78(W)×10.43(H)×14.76(D) in
Remote controller 205(W)×71(H)×68.3(D) mm; 8.07(W)×2.80(H)×2.69(D) in
- Weight (Included in the remote controller) : 25 kg; 55.12 lb (Included in the remote controller)

■ LINEAR AMPLIFIER

- Output power :

MODE	INPUT AC VOLTAGE	
	90–132 V AC	180–264 V AC
CW, RTTY	450–600 W*[1]	950–1150 W
SSB	450–600 W PEP*[2]	950–1150 W PEP

*[1] EUR-1 version is 450–550 W;
*[2] EUR-1 version is 450–550 W PEP

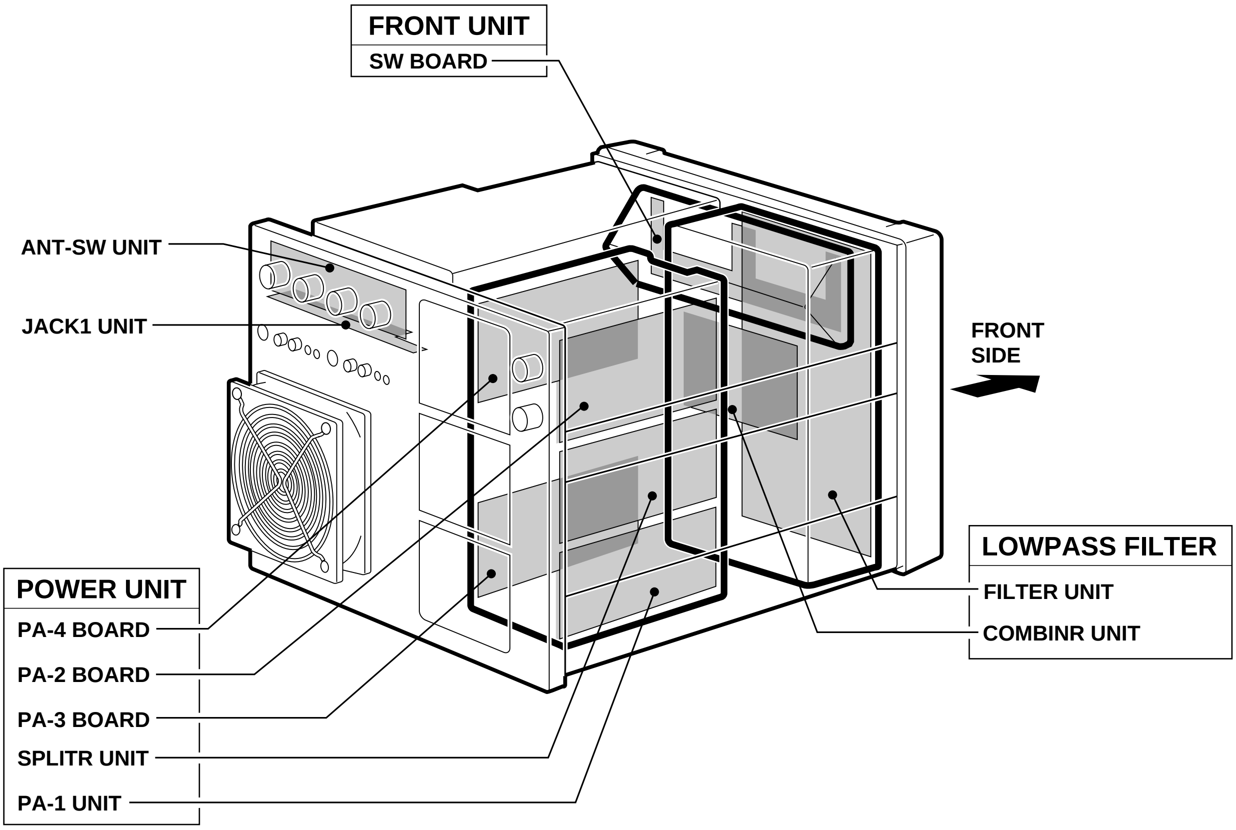
- Driving power : Max. 100 W
- Sprious emissions : Less than –60 dB (for HF bands)
Less than –70 dB (for 50 MHz band)

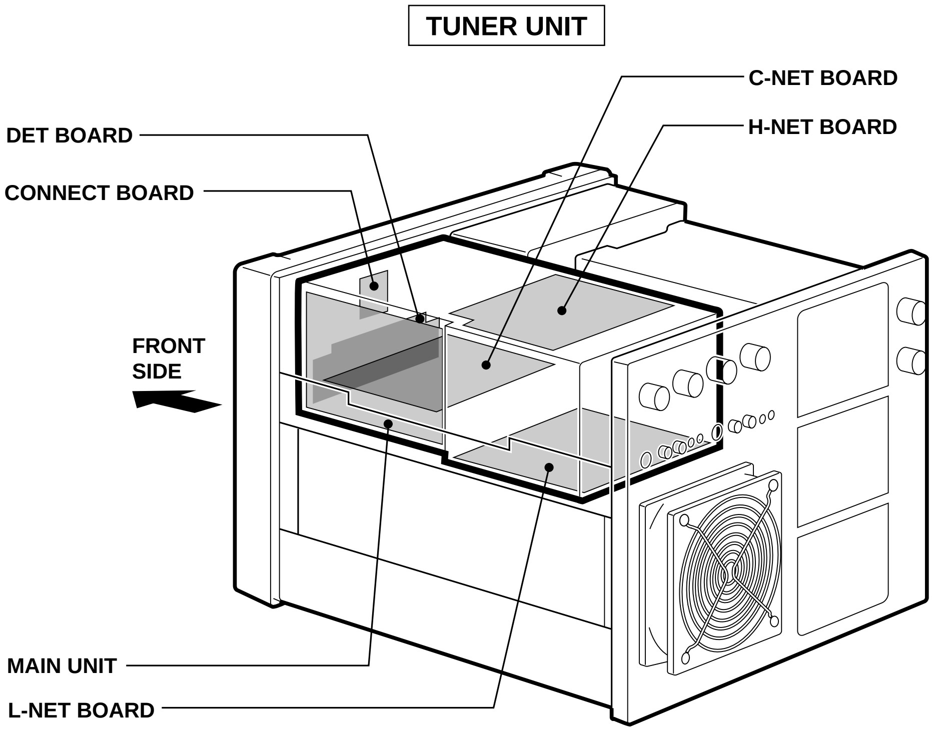
■ ANTENNA TUNER

- Output matching range : 16.7–150.0 Ω*[1] (for HF bands)
20.0–125.0 Ω (for 50 MHz band)
*[1] Specifications of 1.9 MHz band guaranteed 1.85–1.95 MHz
- Auto tuning accuracy : VSWR 1.5:1 or less
- Min. required input power : 60 W
- Insertion loss : Less than 1 dB (after tuning)

All stated specifications are subject to change without notice or obligation.

SECTION 2 INSIDE VIEWS




TUNER UNIT
C-NET BOARD
H-NET BOARD
DET BOARD
CONNECT BOARD
FRONT SIDE
MAIN UNIT
L-NET BOARD

SECTION 3 CIRCUIT DESCRIPTION

3-1 LINEAR AMPLIFIER CIRCUITS

3-1-1 EXCITER INPUT SWITCHING CIRCUIT (SPLITR UNIT)

The applied signal from the exciter (transceiver) is passed through the exciter select circuit (RL1) then applied to the THROUGH/AMP switching relay (RL2). The switched signal is passed through the attenuator circuit (R3–R6) when the amplifier is activated. The attenuated signal is applied to the power split circuit (L2–L4, L6, R9–R12).

When “THROUGH” is selected, the signal from the exciter select circuit is applied to the FILTER unit via J8.

The attenuator circuit attenuates the switched signal approx. 1 dB to protect the amplifier circuits from excessive input power and stabilizes the amplifying operation.

3-1-2 POWER SPLITTER CIRCUIT (SPLITR UNIT)

The power splitter circuit converts the antenna impedance to ¼ (12.5 Ω) at L2, then the applied RF power level is divided at the hybrid circuit (L3, R9, R10). The divided RF signals are separately passed through another hybrid circuit (L4, R11 and L6, R12) to convert the impedance to 50 Ω and divide the power level.

The power level divided signal is applied to the one of four PA units (PA1–PA4) via J4 to J7.

The RF power level at J4, J5, J6 and J7 is approx. ⅕ of applied power (from the exciter).

3-1-3 POWER AMPLIFIER CIRCUITS (PA1–4 BOARDS)

The power level divided signal from the SPLITR unit is amplified at the power amplifier circuit (Q1a/b). The amplified signal is applied to the COMBINR unit.

Two power MOS-FETs (MRF150) and a negative feedback circuit are employed for each PA unit to obtain a stable 300 W or higher of RF power and to maintain response gain for all bands within 3 dB.

3-1-4 POWER COMBINER CIRCUIT (CONBINR UNIT)

The amplified signals from the PA1 and PA2 boards are combined at the hybrid circuit (L1, R1) to obtain a 500 W RF level and the impedance is converted to 25 Ω.

The amplified signals from the PA3 and PA4 boards are combined at another hybrid circuit (L2, R2).

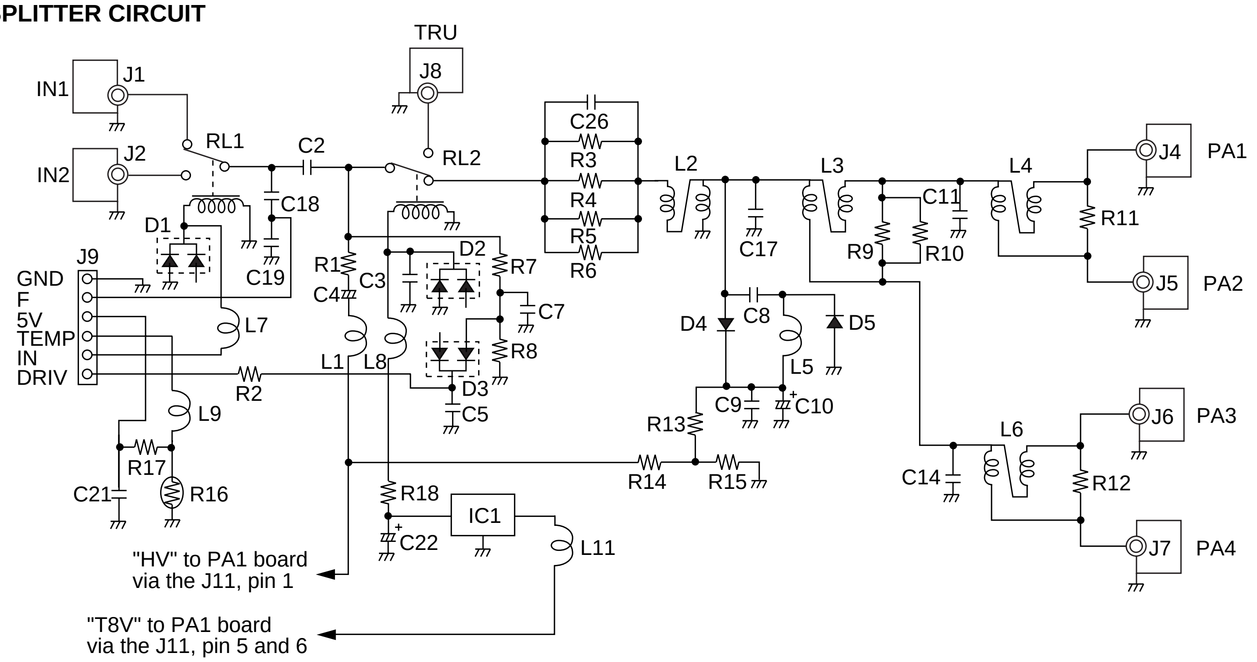
Both signals are again combined at another hybrid circuit (L3, R3) to obtain a 1 kW RF level and the impedance is converted to 12.5 Ω. The combined signal is applied to the FILTER unit via the impedance convertor (L5) for conversion to 50 Ω impedance.

3-1-5 FILTER CIRCUIT (FILTER UNIT)

The signal from the CONBINR unit is passed through one of 8 low-pass filters.

The filtered signal is applied to the matching circuit.

• SPLITTER CIRCUIT



2-step (3-step for the 50 MHz band) Chebyschev low-pass filters are adopted, to obtain –60 dB or less higher harmonic emissions for all HF bands or –70 dB or less for the 50 MHz band.

The filtered signal is passed through or bypasses the antenna tuner and is then applied to one of four antenna connectors via the antenna select relay (RL1–RL4) on the ANT-SW unit.

3-2 ANTENNA TUNER CIRCUITS

3-2-1 MATCHING CIRCUIT (TUNER UNIT)

The matching circuit is a T-network. Using 2 tuning motors, the matching circuit obtains rapid overall tuning speed.

Using relays (TUNER unit; RL1–RL10, L-NET board; RL1, RL2, H-NET board; RL1–RL10), the relay control signals from the antenna tuner CPU (MAIN unit; IC12) via the relay driver (MAIN unit; IC14) ground one of the taps of L3–L5 (L-NET board) or L11–L15 (H-NET board) and add network capacitors (C-NET board). After selecting the coils and capacitors, 2 motors (TUNER unit; MF1, MF2) adjust C1 and C2 using the antenna tuner CPU and the motor driver (MAIN unit; IC15) to obtain a low SWR (Standing Wave Ratio).

3-2-2 DETECTOR CIRCUIT (MAIN AND FILTER UNITS)

(1) SWR detector

Forward and reflected power are picked up by a current transformer (FILTER unit; L22), detected by D15 and D16, and then applied to the MAIN unit.

The applied signals are amplified at the SWR amplifier (MAIN unit; IC31a/b). The amplified voltages are applied to the antenna tuner CPU (MAIN unit; IC12, pins 2, 3). The CPU detects the SWR.

(2) Reactance components detector

Reactance components are picked up by comparing the phase of the RF current and RF voltage. The RF current is detected by L3 and R4 (DET board), and then amplified at IC1a and IC2d. The amplified RF current is applied to the phase comparator (DET board; IC4, pin 13). The RF voltages are detected at C1–C3 on the DET board, and amplified at IC1c and IC2a, then applied to the phase comparator (IC4, pin 1). The output signal from the phase comparator (IC4, pin 6 for RF voltage, pin 9 for RF current) is rectified at D13 and D14 for conversion into DC voltage. The rectified voltage signals are combined, then applied to the antenna CPU (MAIN unit; IC12, pin 64) after being amplified at IC9a on the MAIN unit.

ECL-IC is used for IC1 and IC2 on the DET board to ensure quick and stable signal detection even at low RF signal level input.

(3) Resistance components detector

Resistance components are picked up by L5, R14 and R21, and detected by Q1, D11 and D12 on the DET board. The detected resistance components are amplified at IC9a on the MAIN unit, and then applied to the antenna CPU (IC12, pin 1).

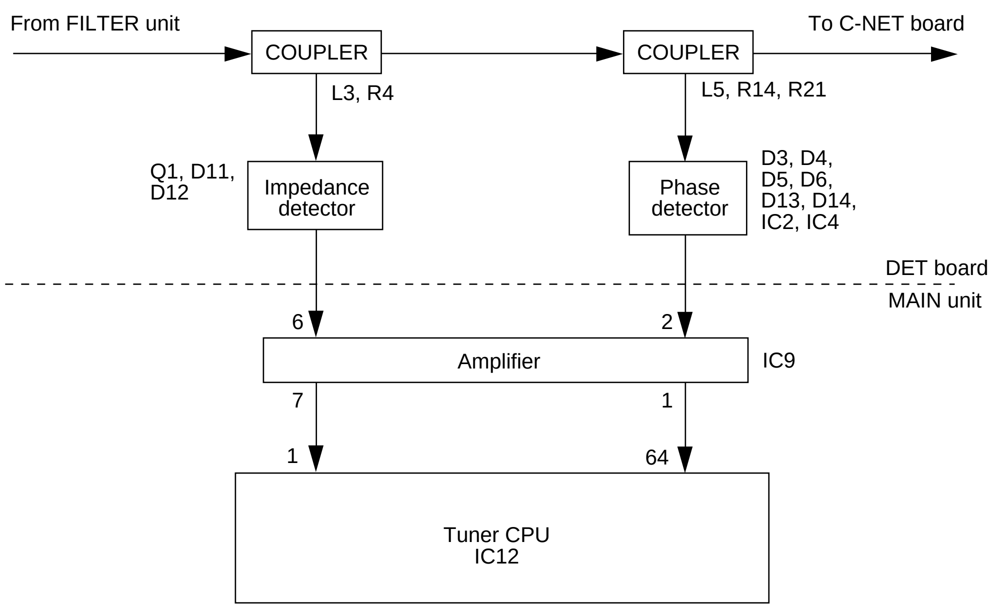
3-2-3 MOTOR CONTROL CIRCUIT (MAIN UNIT AND C-NET, L-NET, H-NET BOARDS)

The control circuit of the internal antenna tuner consists of the CPU, EEPROM, tuning motors and tuning relays.

(1) CPU and EEPROM (MAIN unit)

The antenna tuner CPU (IC12) controls the tuning motors via the motor driver (IC15) and tuning relays via the relay driver (IC14, Q9–Q14). The CPU memorizes the best preset position and the contents are stored in the EEPROM (IC7) without the need for a backup battery.

• DETECTOR CIRCUIT



(2) Tuning controls (MAIN unit)
A motor driver (IC15) rotates the tuning motors (MF1, MF2) to obtain a low SWR.

(3) Tuning relays (C-NET, L-NET and H-NET boards)
According to the operating frequency band and antenna condition, tuning relays select the capacitors and coils.

3-3 PROTECTION CIRCUITS

3-3-1 GENERAL

The IC-PW1 has two protection systems. One system bypasses the power amplifier, and the other system shuts down the internal power supply activation.

Protection activates when:
- the a mismatched frequency band signal is transmitted.
- the ALC control level exceeds the control range.
- the power level balance between the 4 PA units becomes unbalanced.
- the output voltage of the internal power supply (V_D) exceeds 55 V DC.
- the current of the power amplifiers (I_D) exceeds 50 A.
- the heatsink temperature of the power amplifier exceeds +100˚C (212˚F).
- the applied AC voltage exceeds the specified value.

The main CPU controls the THROUGH/AMP switch and internal power supply operation.

3-3-2 ALC CIRCUIT (MAIN UNIT)

The ALC (Automatic Level Control) circuit automatically limits its RF output power by controlling the input level of the exciter.

(1) FOR-ALC
The detected "FOR" voltage signal from the SWR detector circuit (FILTER unit; D15, D16, L22) is op-amplified at IC1a then applied to the ACC2 socket (JACK1 unit; J5, pin 5) via the ALC adjustment pot (JACK1 unit; R1) and ALC2 jack (JACK2 unit; J7).

(2) I_D-ALC
In the IC-PW1, internal power supply voltage (I_D) is used for I_D-ALC. The power supply voltage (I_D) is amplified at the op-amplifier (IC1c), then applied to the ACC2 socket.

(3) SWR-ALC
SWR-ALC protects the power amplifiers (PA1–PA4 boards; Q1a/b) when SWR worsens and when dielectric breakdown/discharge from excessive voltage rises.

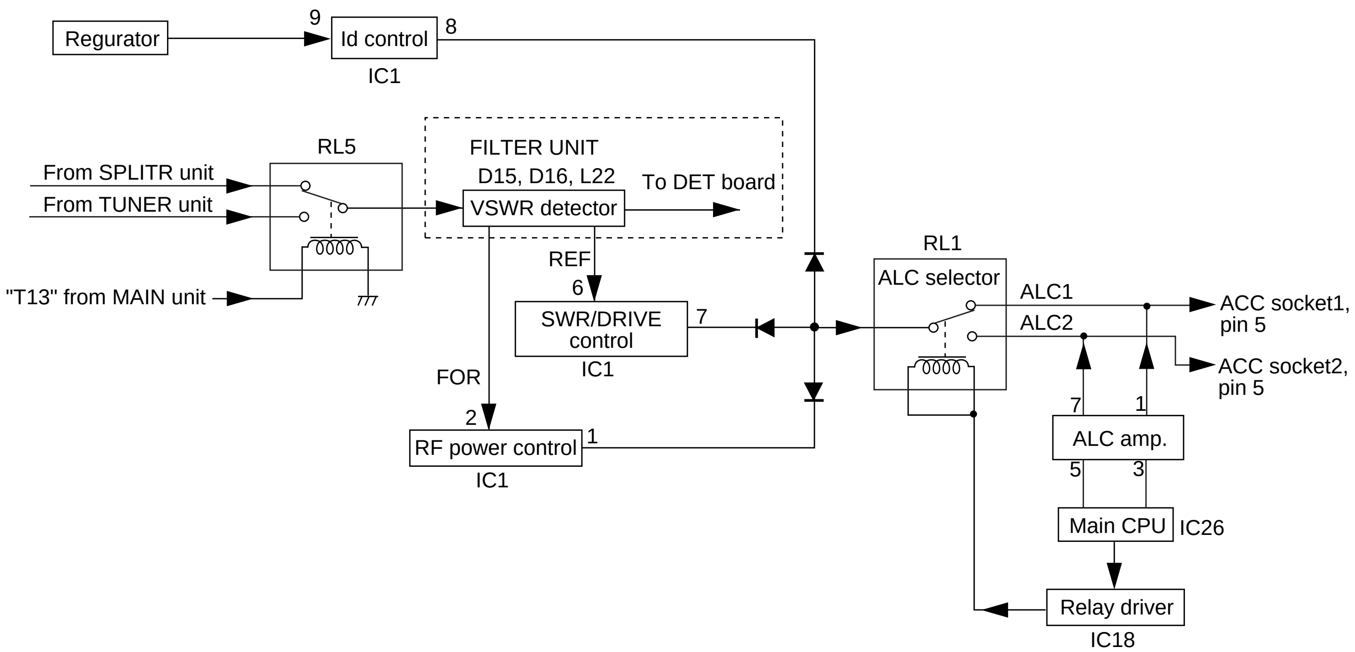
The detected "REF" voltage signal from the SWR detector circuit (FILTER unit; D15, D16, L22) is op-amplified at the SWR/DRIVE amplifier (IC1b) then applied to the ACC2 socket (JACK1 unit; J5, pin 5).

(4) DRV-ALC
DRV-ALC activates when the exciter input exceeds 120 W to protect the power amplifiers. The op-amplified "REF" signal at the SWR/DRIVE amplifier (IC1b) is used for operation. However, the limiter circuit on the SPRITR unit (D4, D5) is activated for momentary excessive input such as leading edge power, etc.

3-3-3 DRIVING POWER DETECTOR CIRCUIT (SPLITR AND MAIN UNITS)

A portion of the attenuated input power from the exciter input switching circuit (SPLITR unit; RL1) is divided by R7 and R8, and then rectified at D3, R2 and C5 for conversion to DC voltages. The rectified DC voltages are applied to the drive amplifier (MAIN unit; IC21a/b). The amplified DC voltages are applied to the main CPU (MAIN unit; IC26)

• ALC CIRCUITS



3-3-4 TEMPERATURE DETECTOR CIRCUIT (SPLITR AND MAIN UNITS)

The temperature detector circuit detects the temperature of the heatsink for final FETs and controls amplifying operation.

A thermistor (SPLITR unit; R16) detects temperature of the heatsink for final FETs, and the detected temperature signal (DC voltage) is applied to the main CPU (MAIN unit; IC26, pin 12), to control the cooling fans and amplifying operation.

Common 5 V is applied to the thermistor for reference.

3-3-5 DRIVING FREQUENCY DETECTOR CIRCUIT (SPLITR AND MAIN UNITS)

A portion of the RF signal from RL1 (SPLITR unit) is divided at C18 and C19, then applied to the driving frequency detector circuit in the MAIN unit as the “F” signal.
The “F” signal from the SPLITR unit is amplified at the limiter amplifier (MAIN unit; IC30) after being amplified at Q34 and Q35. The amplified signal is divided at the divider (MAIN unit; IC20) for conversion to pulse-type signals. The signals are applied to the main CPU (MAIN unit; IC26, pin 76). The CPU counts the number of pulses as the driving frequency, then controls the protector for frequency band selection.

The driving frequency detector circuit detects the input power level at the same time to prevent malfunction at low power level inputs.

3-4 POWER SUPPLY CIRCUITS

• VOLTAGE LINE

LINE	DESCRIPTION
H12	+12 V line from the regulator circuit. The output voltage is applied to the meter lamp (FRONT unit; DS1, DS2).
12 V	12 V controlled from a H12 line by the relay control circuit (IC8, IC9).
5 V	5 V DC converted from a 12 V line at IC5 on the MAIN unit. The voltage is used for the phase detector on the DET unit.
+5 V	5 V DC converted from a S12 line (+12 V) at IC6 on the FRONT unit. The voltage is used for the output expander IC on the FRONT unit.
–5 V	–5 V DC converted from a –13 V line at IC5 on the DET board.
–13 V	–13 V DC converted from a H12 (+12 V) line at IC8 on the MAIN unit.
T13	Transmit 13 V DC converted from a H12 (+12 V) line at Q3 on the MAIN unit.
T8V	Transmit 8 V DC converted from a T13 line at IC1 on the SPLITR unit. The output voltage is used for PA1, PA2, PA3 and PA4 on the PA unit.
HV	45 V line from the regulator circuit. The voltage is used for PA1, PA2, PA3 and PA4 on the PA unit.

3-5 PORT ALLOCATIONS

3-5-1 EXPANDER IC (SWITCH BOARD; IC1)

Pin number	Port name	Description
4	I1L	Outputs INPUT “1” LED control signal. High: While INPUT “1” LED is ON.
5	I2L	Outputs INPUT “2” LED control signal. High: While INPUT “2” LED is ON.
11	A4L	Outputs ANT “4” LED control signal. High: While ANT “4” LED is ON.
12	A3L	Outputs ANT “3” LED control signal. High: While ANT “3” LED is ON.
13	A2L	Outputs ANT “2” LED control signal. High: While ANT “2” LED is ON.
14	A1L	Outputs ANT “1” LED control signal High: While ANT “1” LED is ON.

3-5-2 EXPANDER IC (SWITCH BOARD; IC2)

Pin number	Port name	Description
4	VML	Outputs “V_D” LED control signal. High: While “V_D” LED is ON.
5	SML	Outputs “SWR” LED control signal. High: While “SWR” LED is ON.
6	AML	Outputs “ALC” LED control signal. High: While “ALC” LED is ON.
12	TML	Outputs “TEMP” LED control signal. High: While “TEMP” LED is ON.
13	IML	Outputs “I_D” LED control signal. High: While “I_D” LED is ON.
14	PML	Outputs “P_O” LED control signal. High: While “P_O” LED is ON.

3-5-3 EXPANDER IC (SWITCH BOARD; IC3)

Pin number	Port name	Description
4	50ML	Outputs "50" LED control signal. High: While "50" LED is ON.
6	24ML	Outputs "24" LED control signal. High: While "24" LED is ON.
11	7ML	Outputs "7" LED control signal. High: While "7" LED is ON.
12	10ML	Outputs "10" LED control signal. High: While "10" LED is ON.
13	14ML	Outputs "14" LED control signal. High: While "14" LED is ON.
14	18ML	Outputs "18" LED control signal.

3-5-4 EXPANDER IC (SWITCH BOARD; IC4)

Pin number	Port name	Description
4	3_5M	Outputs "3.5" LED control signal. High: While "3.5" LED is ON.
5	1_9M	Outputs "1.8" LED control signal. High: While "1.8" LED is ON.
11	PROL	Outputs "AMP/PROTECT" LED control signal. High: While "AMP/PROTECT" LED is ON.
12	PAL	Outputs "AMP/PROTECT" LED control signal. High: While "AMP/PROTECT" LED is ON.
13	TUNL	Outputs "TUNER" LED control signal. High: While "TUNER" LED is ON.
14	TRANS	Outputs "TRANSMIT" LED control signal. High: While "TRANSMIT" LED is ON.
15	AUTOL	Outputs "AUTO" LED control signal. High: While "AUTO" LED is ON.

3-5-5 SHIFT REGISTER IC (SWITCH BOARD; IC7)

Pin number	Port name	Description
1	ANT	Input port for the antenna switching signal. Low: When "ANT" switch is pushed.
4	TUNER	Input port for the tuner power ON/OFF switching signal. Low: When "TUNER" switch is pushed.
5	PA	Input port for the PA power ON/OFF switching signal. Low: When "AMP/PROTECT" switch is pushed.
6	MET1	Input port for the meter mode select signal for meter-1. Low: When "METER-1" switch is pushed.
7	MET2	Input port for the meter mode select signal for meter-2. Low: When "METER-2" switch is pushed.
13	BUP	Input port for the band up signal. Low: When "UP" switch is pushed.
14	BDN	Input port for the band down signal. Low: When "DOWN" switch is pushed.
15	I1/2	Input port for the port select signal. Low: When "INPUT" switch is selected.

3-5-6 CPU (MAIN UNIT; IC26)

Pin number	Port name	Description
7	FOR	Input port for the forward power voltage from IC2 (pin 1).
8	REF	Input port for the reflected voltage from IC2 (pin 7).
9	Vc	Input port for the voltage from power supply “VO” signal. The voltage is controlled by R197.
10	Ic	Input port for the current from power supply “IO” signal. The current is controlled by R22.
11	ALCM	Input port for the ALC signal which is used for the METER-2.
12	TEMP	Input port for the signal about temperature of the heatsink.
16	USA	Input port for the version set signal. Low: USA version is set.
17	JPN	Input port for the version set signal. Low: JPN version is set.
32	SEND	Input port for the transmit switching signal. Low: While transmitting
33	I1/2	Outputs a input port select signal. Low: When INPUT1 is selected. High: When INPUT2 is selected.
35	1.9MF	Outputs a bandpass filter select signal. High: When 1.8–1.999 MHz band is selected.
36	3.5MF	Outputs a bandpass filter select signal. High: When 3.5–3.999 MHz band is selected.
37	7MF	Outputs a bandpass filter select signal. High: When 7.0–7.300 MHz band is selected.
38	10MF	Outputs a bandpass filter select signal. High: When 10.10–10.150 MHz band is selected.
39	14MF	Outputs a bandpass filter select signal. High: When 14.10–14.350 MHz band is selected.
40	18MF	Outputs a bandpass filter select signal. High: When 18.068–18.168 MHz band is selected.
41	24MF	Outputs a bandpass filter select signal. High: When 24.980–24.990 MHz band is selected.
42	50MF	Outputs a bandpass filter select signal. High: When 50.000–54.000 MHz band is selected.
43	ANT1	Outputs ANT1 select signal to RL4 on the ANT-SW unit. Low : When ANT1 is selected.
44	ANT2	Outputs ANT2 select signal to RL3 on the ANT-SW unit. Low : When ANT2 is selected.
45	ANT3	Outputs ANT3 select signal to RL2 on the ANT-SW unit. Low : When ANT3 is selected.
46	ANT4	Outputs ANT4 select signal to RL1 on the ANT-SW unit. Low : When ANT4 is selected.
47	PAF	Outputs cooling fan control signal for the PA unit. High: The PA fan is working.
48	TUF	Outputs cooling fan control signal for the CHASSIS unit. High: The tuner fan is working.
49	REGF	Outputs cooling fan control signal for the power supply unit. High: The power supply fan is working.
56	STA	Data output port to the tuner CPU in the MAIN unit.
62	ACC81	Input port for the informed signal about the power switch of the exciter on JACK1 unit. High: When power of the exciter is ON.
73	REGT	Input port for the protect signal about tempareture of the power supply. High: While protecting.
74	BALA	Input port for the signal to obtain stable power from the PA unit.
79	KEY	Data input port from the tuner CPU in the MAIN unit.
80	MAXI	Input port for the protect signal about the the power supply current. High: While protecting.

SECTION 4 ADJUSTMENT PROCEDURES

4-1 PREPARATION

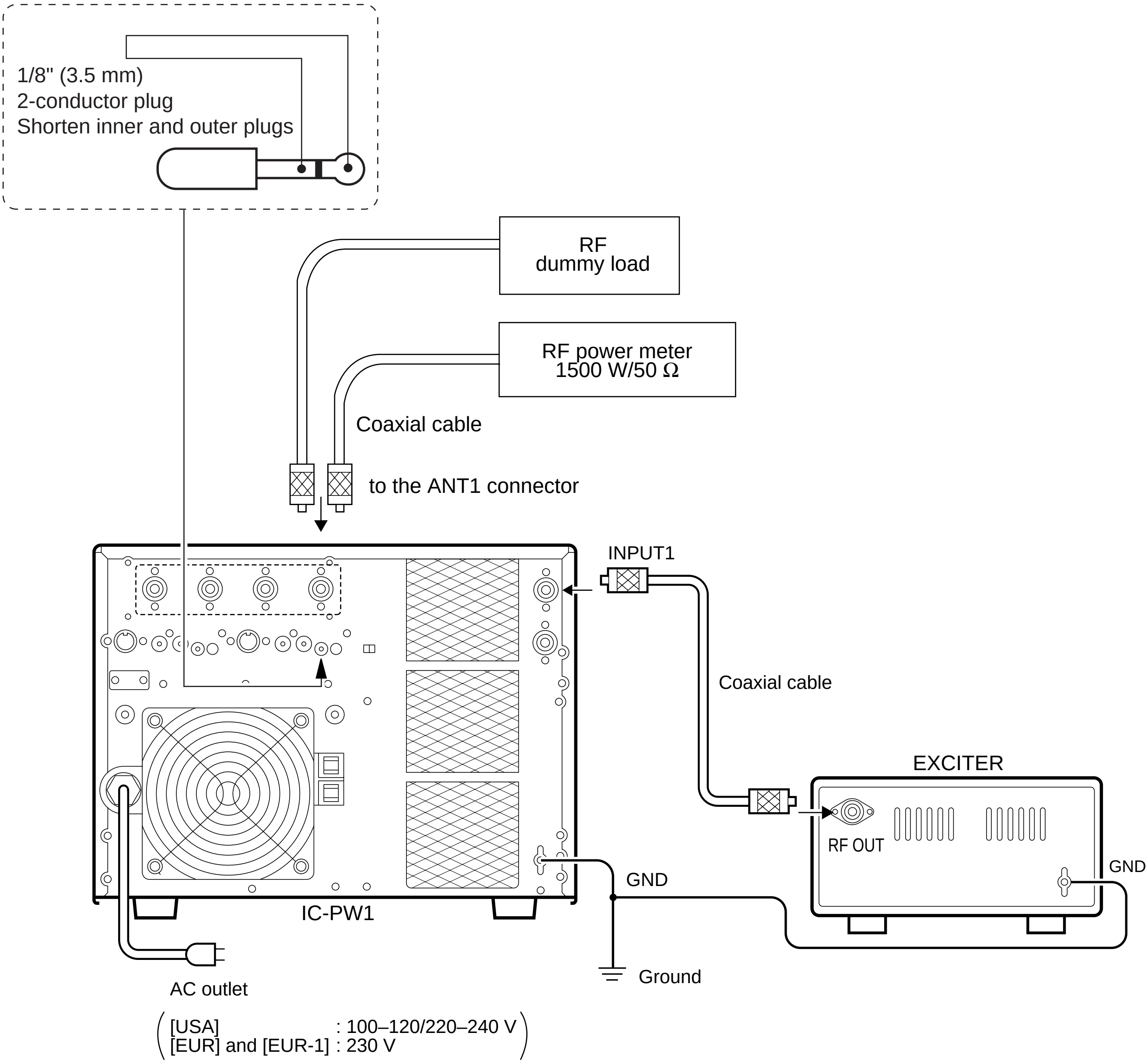
■ REQUIRED TEST EQUIPMENT

EQUIPMENT	GRADE AND RANGE	
Exciter (Transceiver)	Frequency range Output power Mode	: 1.8–60 MHz : 50–100 W : RTTY or FM
	IC-736 (for tuner basis voltage adjustment)	
RF power meter (terminated type)	Measuring range Frequency range Impedance SWR	: 10–1500 W : 1.8–60 MHz : 50 Ω : Less than 1.2 : 1

EQUIPMENT	GRADE AND RANGE	
Ammeter	Capability	: 0.1–100 A
RF dummy load	Impedance Capability	: 50, 100 and 150 Ω : 1500 W or more
Digital DC voltmeter	Input impedance	: 10 MΩ/V DC or better
DC voltmeter	Input impedance	: 50 kΩ/V DC or better
Load-resistor	Capability	: 9.7–10.3 A

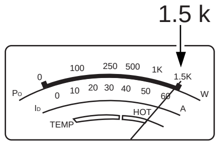
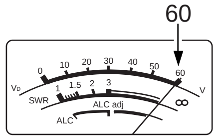
■ CONNECTION

Connect 2-conductor plug to REMOTE connector when adjusting meter maximum point.



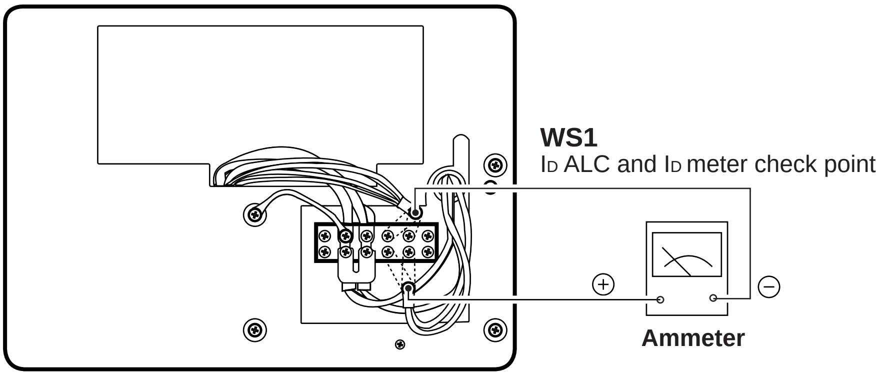
4-2 PA AND FRONT UNIT ADJUSTMENT

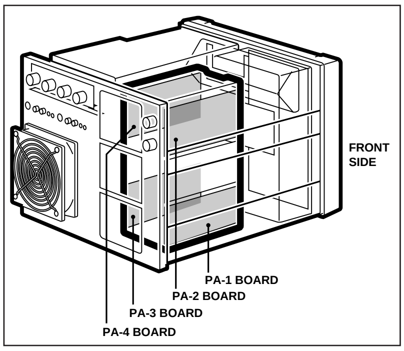
Idling current must be taken out the PA unit from the main body.

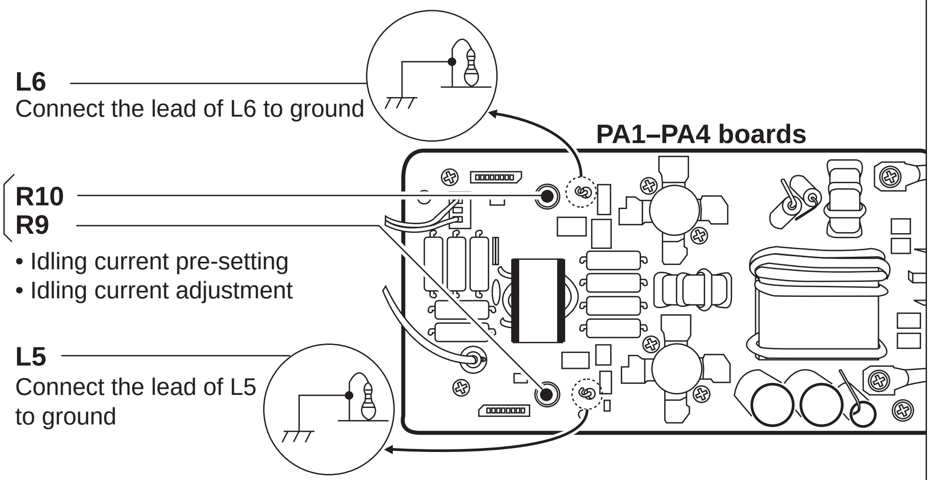
ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
			UNIT	LOCATION		UNIT	ADJUST
IDLING CURRENT	1	• [POWER] switch : OFF • Pre-set R9 and R10 on the PA1 board to maximum counterclockwise position. • [POWER] switch : ON • [AMP] switch : ON • Exciter frequency : 14.1 MHz • Mode : USB • Apply no audio signal to the [MICROPHONE] connector. • Connect the lead of L6 to ground. • Transmitting.	Front panel	Connect the DC ammeter to the HV line between PA1 board and the power supply unit.	100 mA	PA1	R9
	2	• Disconnect the lead of L6 from ground. • Connect the lead of L5 to ground. • Transmitting.	Front panel	Connect the DC ammeter to the HV line between PA1 board and the power supply unit.	200 mA	PA1	R10
	3	• Disconnect the lead of L5 from ground. • Connect the lead of L6 to ground.			200 mA		R9
	4	• Same adjustments as steps 1–4 for PA2–PA4 boards.					
METER MAXIMUM POINT	1	• [POWER] switch : OFF • Connect the terminator to [REMOTE] jack, then while pushing the [ANT] switch, turn power ON. • METER-1 : [P_O] scale • METER-2 : [V_D] scale	Controller	[METER-1]	Set as below : 1.5 k  METER-1	SW	R56
	2			[METER-2]	Set as below : 60  METER-2		R57

• Idling current adjustment

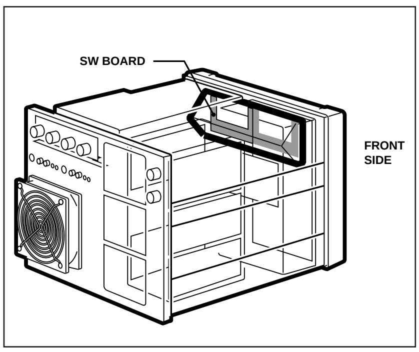
Front side (after removed front panel)

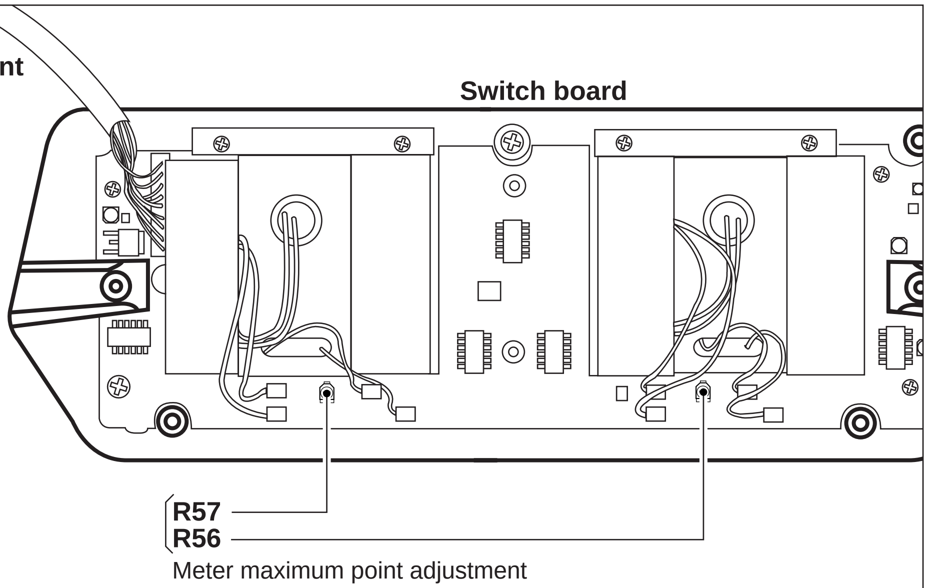






• Meter maximum point adjustment





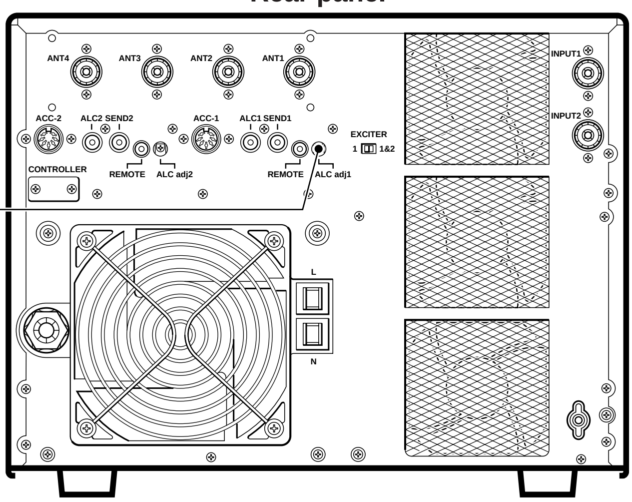
4-3 MAIN UNIT ADJUSTMENT

The TUNER BASIS VOLTAGE ADJUSTMENT needs the IC-736 as an exciter.

ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
			UNIT	LOCATION		UNIT	ADJUST
SWR DETECTOR CIRCUIT	1	• Input AC voltage : 200 V • Pre-set R4, R6, R15 to 90° counterclockwise • Pre-set R5, R22 to center. • Pre-set S3 to 5, and S4 to 4. • [METER-1] : [PO] scale • Pre-set ALC adj1 to max. counterclockwise, and then turn slowly ALC adj1 to max. clockwise. • Exciter frequency : 54.0 MHz • Mode : RTTY • RF power : minimum • Transmitting	Controller	[METER-1]	400 W	Exciter	RF power volume
	2	• [METER-2] : [SWR] scale • Transmitting		[METER-2]	Minimum value	FILTER	C73
		• After adjustment, reset ALC adj1 to max. conterclockwise.					
TUNER BASIS VOLTAGE	1	• Disconnect J5 on the tuner unit of IC-736, and then connect to J18 on the MAIN unit of IC-PW1. • Connect [ANT1] connector of IC-736 to [INPUT1] connector of IC-PW1. • Connect a 150 Ω dummy load to [ANT1] connector of IC-PW1. • Turn S5 to "SET". • Connect CP1 to ground. • Push and hold [ANT], [ENT] and [TUNER] switches of IC-736, then turn IC-736 ON.	IC-736	DISPLAY	Display of IC-736 shows "SET".		Verify
	2	• Push [TUNER] key of IC-736.			Display of IC-736 shows "END".		
		After adjustment, remove the jumper wire from CP1 and reset S5 to counter side.					

• SWR detector circuit adjustment

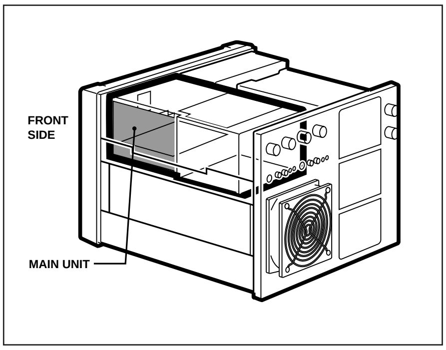
Rear panel



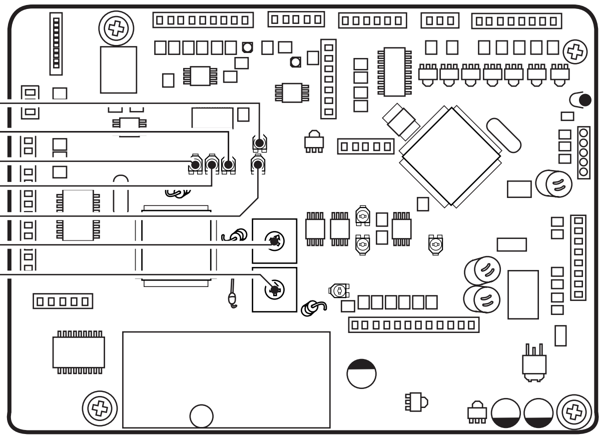
ALC adj1

SWR detector circuit pre-setting

• SWR detector circuit adjustment

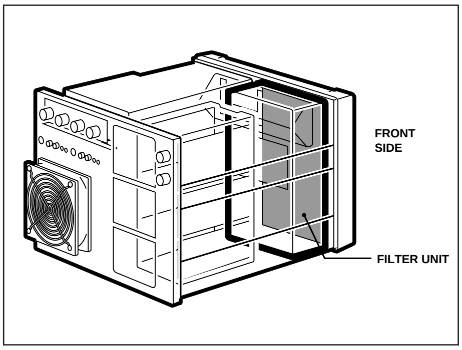


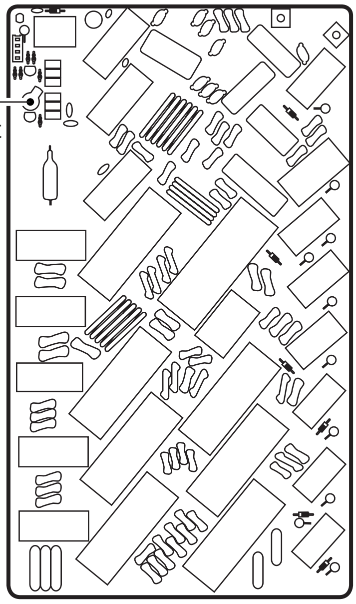
MAIN unit



SWR detector pre-setting: R15, R6, R4, R5, R22, S3, S4

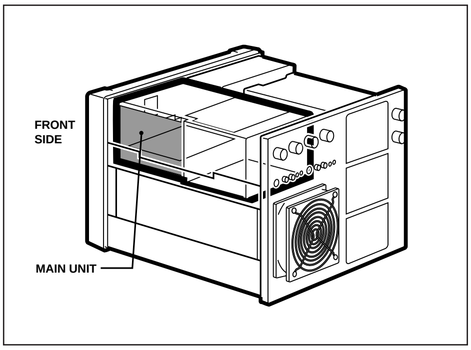
Filter unit





C73
SWR detector circuit adjustment

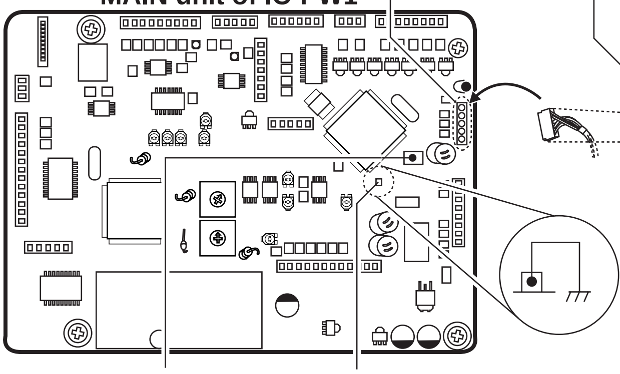
• Tuner basis voltage adjustment



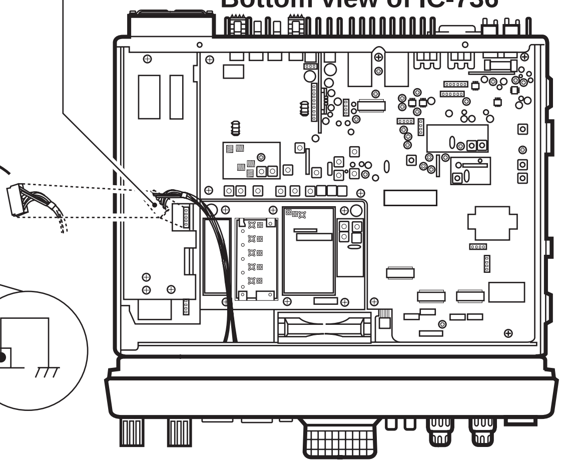
J18
Connect J5 on the tuner unit of IC-736 to here

J5
Disconnect J5 from here

MAIN unit of IC-PW1

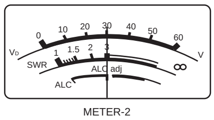
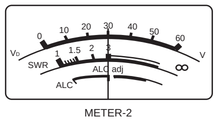


Bottom view of IC-736

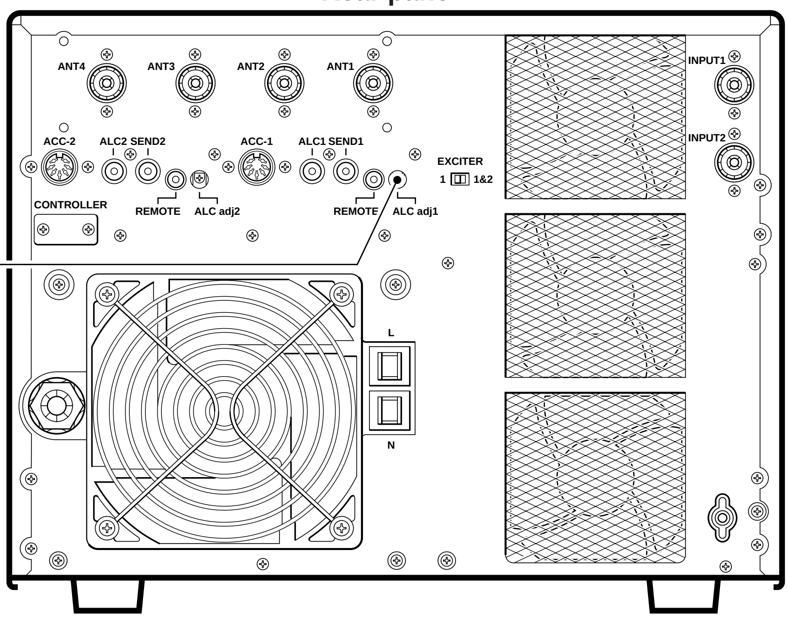


S5 **CP1**
Tuner basis voltage pre-setting

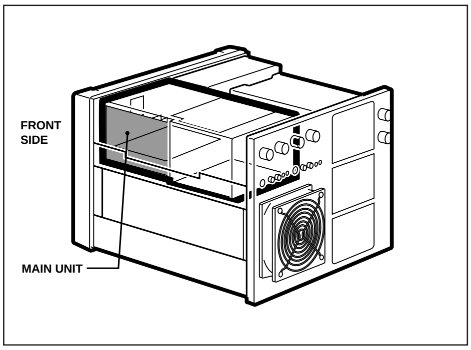
MAIN UNIT ADJUSTMENT (Continued)

ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
			UNIT	LOCATION		UNIT	ADJUST
POWER SET (HF BAND, AC 200 V,)	1	• Input AC voltage : 200 V • METER-1 : [P_O] scale • METER-2 : [ALC] scale • Exciter frequency : 21.1 MHz • Mode : RTTY • Transmitting	Controller	[METER-2]	Set [ALC] meter to center as below:  	REAR panel	ALC adj1
	2		REAR panel	Connect the RF power meter to the [ANT1] connector.	1050 W	MAIN	R4
	3	• Repeat steps1, 2 several times for precision.					
(AC 100 V) [USA], [EUR] only	1	• Input AC voltage : 100 V • Set ALC adj1 to max. counter-clockwise. • Exciter frequency : 14.1 MHz • Mode : RTTY • Transmitting	Controller	[METER-2]	Set [ALC] meter to center as below:  	REAR panel	ALC adj1
	2		REAR panel	Connect the RF power meter to the [ANT1] connector.	520 W	MAIN	R6
	3	• Repeat steps1, 2 several times for precision.					
(50 MHz, AC 200 V)	1	• Input AC voltage : 200 V • Exciter frequency : 50.2 MHz • Mode : RTTY • Transmitting	REAR panel	Connect the RF power meter to the [ANT1] connector.	1020 W	MAIN	R5
P_O METER SET (HF bands)	1	• Turn ALC adj1 to max. counter-clockwise. • METER-1 : [P_O] scale • Exciter frequency : 21.1 MHz • Mode : RTTY • Transmitting	REAR panel	Connect the RF power meter to the [ANT1] connector.	1050 W	REAR panel	ALC adj1
	2		Controller	[METER-1]	1050 W	MAIN	R26
(50 MHz band)	1	• Connect the RF power meter to the [ANT1] connector. • Exciter frequency : 50.2 MHz • Transmitting	Controller	[METER-1]	Same power as the RF power meter.	MAIN	R240
SWR METER SET	1	• Connect a 100 Ω dummy load to [ANT1] connector. • METER-2 : [SWR] scale • Exciter frequency : 14.1 MHz • Mode : RTTY • Power : 1 kW • Transmitting	Controller	[METER-2]	SWR 2	MAIN	R31
V_D METER SET	1	• METER-2 : [V_D] scale • Connect the DC voltmeter between the “HV” line and the “GND” line of the power supply unit.	Controller	[METER-2]	Same voltage as the DC voltmeter.	MAIN	R197

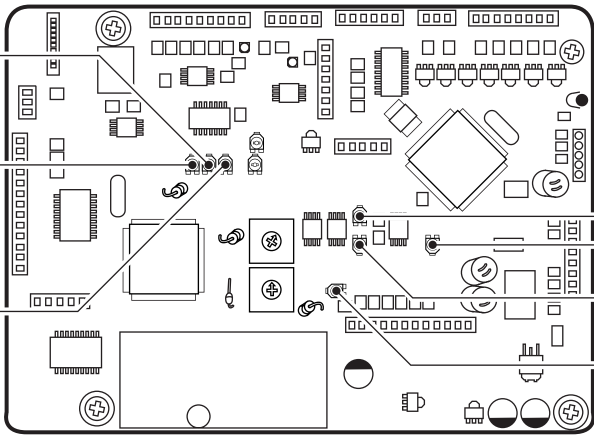
Rear panel



ALC adj1
- Power set adjustment for HF band
- Po meter set adjustment



MAIN unit



R5
Power set adjustment for 50 MHz band

R4
Power set adjustment for HF band (AC 200 V)

R6
Power set adjustment for HF band (AC 100 V)

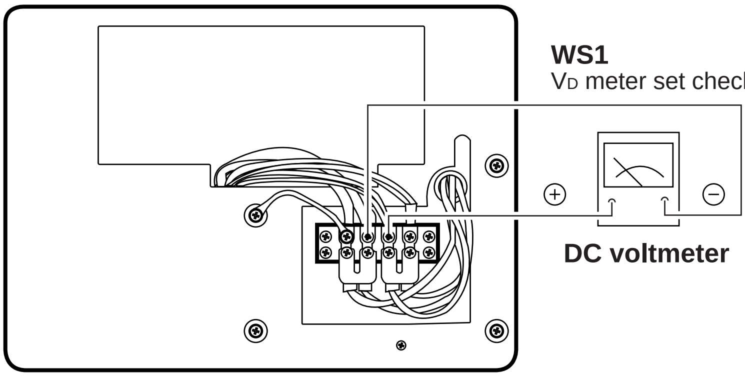
R26
R240
Po meter set adjustment

R31
SWR meter set adjustment

R197
Vd meter set adjustment

• Vd meter set adjustment

Front side (after removed front panel)



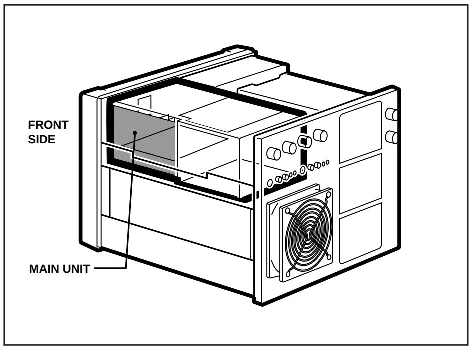
WS1
Vd meter set check point

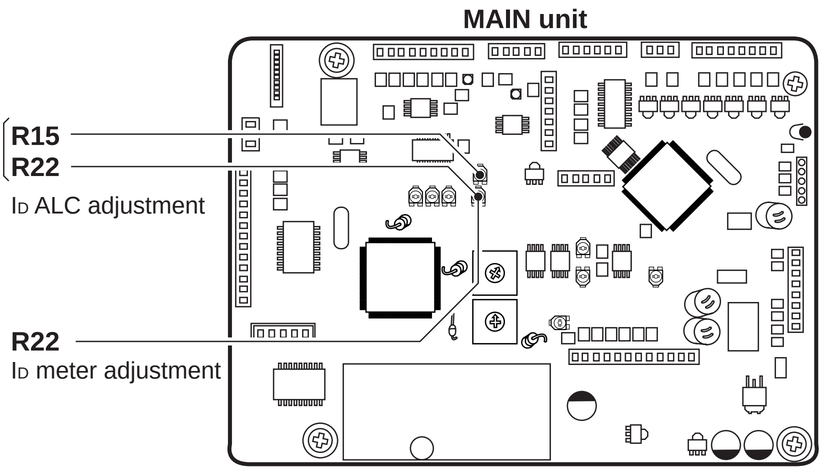
DC voltmeter

MAIN UNIT ADJUSTMENT (Continued)

ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
			UNIT	LOCATION		UNIT	ADJUST
I_D ALC	1	• Connect a DC ammeter to the "HV" line between power supply unit and PA unit. • METER-1 : [I_D] scale. • Exciter frequency : 14.1 MHz • Mode : RTTY • Transmitting	Controller	[METER-1]	Set [I_D] meter to a half value of connecting ammeter.	MAIN	R22
	2		Front panel	Ammeter	38 A	Exciter	RF power
	3	• Connect a load-resistor between "HV" line and "GND" line on power supply unit. • Transmitting • Disconnect a DC ammeter, and then connect a DC ammeter to the "HV" line between power supply unit and a load-resistor.			9.7 – 10.3 A		The load-resistor
	4	• Disconnect a DC ammeter, and then connect a DC ammeter to the "HV" line between power supply unit and PA unit.			34.7 – 35.3 A	MAIN	R15
I_D METER	1	• Connect a DC ammeter to the "HV" line between power supply unit and PA unit. • METER-1 : [I_D] scale. • Exciter frequency : 14.1 MHz • Mode : RTTY • Transmitting	Controller	[METER-1]	The same value of the ammeter.	MAIN	R22

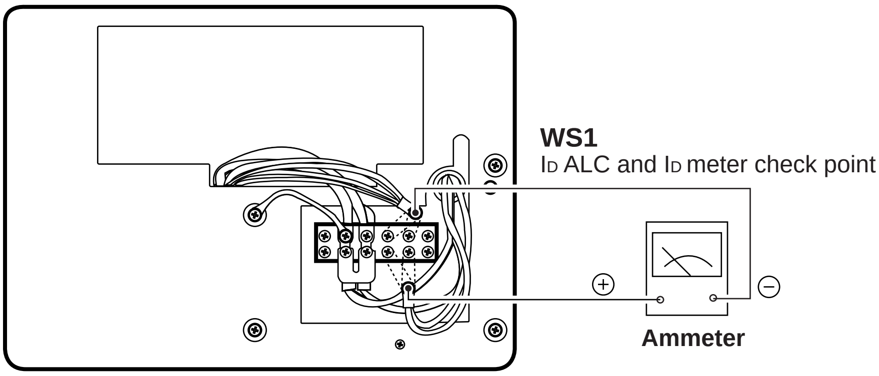
• I_D ALC and I_D meter adjustment





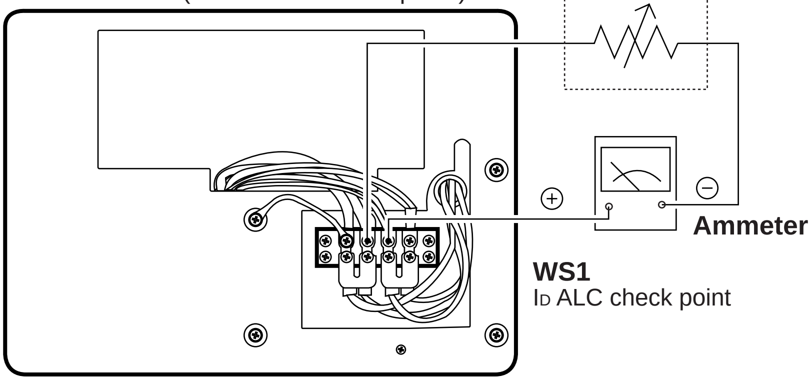
• **I_D ALC and I_D meter adjustment**

Front side (after removed front panel)

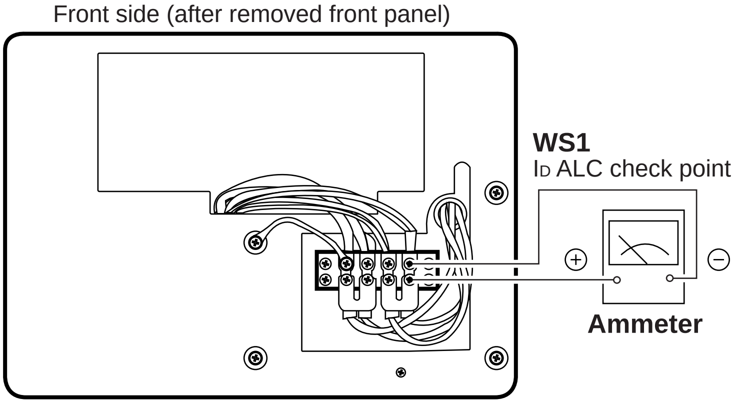


• **I_D ALC adjustment**

Front side (after removed front panel)



Front side (after removed front panel)



SECTION 5 PARTS LIST

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION		
IC1	1110001340	S.IC	NJM3403AM-T1	
IC2	1110000960	S.IC	NJM4558M-T1	
IC3	1110000960	S.IC	NJM4558M-T1	
IC4	1110000960	S.IC	NJM4558M-T1	
IC5	1180001070	S.IC	TA7805F (TE16L)	
IC7	1140003610	S.IC	X24C04S8-2.7T6	
IC8	1180001260	S.IC	BA9700AF-T1	
IC9	1110000960	S.IC	NJM4558M-T1	
IC10	1130003920	S.IC	TC4S69F (TE85R)	
IC11	1130003920	S.IC	TC4S69F (TE85R)	
IC12	1140004120	S.IC	M38022M2-138FP	
IC13	1110001550	S.IC	S-8054ALB-LM-T1	
IC14	1160000130	S.IC	TD62783AF (TP1)	
IC15	1110004510	S.IC	TD62597AFN (EL)	
IC16	1130001880	S.IC	µPD4069UBG-T1	
IC17	1140004450	S.IC	X24C01AS-3.0T6	
IC18	1160000130	S.IC	TD62783AF (TP1)	
IC19	1160000130	S.IC	TD62783AF (TP1)	
IC20	1130008410	S.IC	TC74AC393F (EL)	
IC21	1110000960	S.IC	NJM4558M-T1	
IC25	1110001550	S.IC	S-8054ALB-LM-T1	
IC26	1140007690	S.IC	TMP90PM38F	
IC27	1130003760	S.IC	TC4S81F (TE85R)	
IC28	1140003830	S.IC	TC4W66F (TE12L)	
IC30	1130007430	S.IC	TC7S14FU (TE85R)	
IC31	1110000960	S.IC	NJM4558M-T1	
IC33	1130005820	S.IC	TC4S584F (TE85R)	
Q1	1510000780	S.TRANSISTOR	2SA1586-Y (TE85R)	
Q2	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)	
Q3	1520000530	S.TRANSISTOR	2SB1119S-TD	
Q4	1590002310	S.TRANSISTOR	DTC114EE TL	
Q5	1520000530	S.TRANSISTOR	2SB1119S-TD	
Q6	1590002310	S.TRANSISTOR	DTC114EE TL	
Q7	1520000530	S.TRANSISTOR	2SB1119S-TD	
Q8	1590002310	S.TRANSISTOR	DTC114EE TL	
Q9	1520000530	S.TRANSISTOR	2SB1119S-TD	
Q10	1520000530	S.TRANSISTOR	2SB1119S-TD	
Q11	1520000530	S.TRANSISTOR	2SB1119S-TD	
Q12	1520000530	S.TRANSISTOR	2SB1119S-TD	
Q13	1520000530	S.TRANSISTOR	2SB1119S-TD	
Q14	1520000530	S.TRANSISTOR	2SB1119S-TD	
Q15	1520000530	S.TRANSISTOR	2SB1119S-TD	
Q16	1590002310	S.TRANSISTOR	DTC114EE TL	
Q17	1590002310	S.TRANSISTOR	DTC114EE TL	
Q18	1590002310	S.TRANSISTOR	DTC114EE TL	
Q19	1590002310	S.TRANSISTOR	DTC114EE TL	
Q20	1590002310	S.TRANSISTOR	DTC114EE TL	
Q21	1590002310	S.TRANSISTOR	DTC114EE TL	
Q22	1590002310	S.TRANSISTOR	DTC114EE TL	
Q23	1510000780	S.TRANSISTOR	2SA1586-Y (TE85R)	
Q24	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)	
Q25	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)	
Q26	1510000670	S.TRANSISTOR	2SA1588-GR (TE85R)	
Q27	1520000530	S.TRANSISTOR	2SB1119S-TD	
Q28	1590002310	S.TRANSISTOR	DTC114EE TL	
Q29	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)	
Q30	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)	
Q32	1590002310	S.TRANSISTOR	DTC114EE TL	
Q33	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)	
Q34	1530002370	S.TRANSISTOR	2SC2714-O (TE85R)	
Q35	1560000270	S.FET	2SK302-Y (TE85R)	
Q36	1590002310	S.TRANSISTOR	DTC114EE TL	
Q100	1590002310	S.TRANSISTOR	DTC114EE TL	
Q101	1520000580	S.TRANSISTOR	2SB1124S-TD	
Q102	1590002310	S.TRANSISTOR	DTC114EE TL	
Q103	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)	
Q104	1590002310	S.TRANSISTOR	DTC114EE TL	
Q105	1590002310	S.TRANSISTOR	DTC114EE TL	
Q106	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)	
Q107	1590002310	S.TRANSISTOR	DTC114EE TL	
Q108	1590002310	S.TRANSISTOR	DTC114EE TL	
Q109	1590002310	S.TRANSISTOR	DTC114EE TL	
Q111	1590002310	S.TRANSISTOR	DTC114EE TL	
D1	1790001640	S.DIODE	1SS373 (TPH3)	
D2	1790000620	S.DIODE	MA77 (TX)	
D3	1790000620	S.DIODE	MA77 (TX)	
D4	1730000680	S.ZENER	RD4.7M-T2B2	
D6	1730000680	S.ZENER	RD4.7M-T2B2	
D7	1790001640	S.DIODE	1SS373 (TPH3)	
D8	1790001640	S.DIODE	1SS373 (TPH3)	
D11	1750000270	S.DIODE	1SS301 (TE85R)	
D12	1750000270	S.DIODE	1SS301 (TE85R)	
D13	1750000290	S.DIODE	1SS300 (TE85R)	
D14	1750000290	S.DIODE	1SS300 (TE85R)	
D15	1790001130	S.DIODE	D2FS4-4063	
D16	1790000620	S.DIODE	MA77 (TX)	
D17	1790000620	S.DIODE	MA77 (TX)	
D18	1790000620	S.DIODE	MA77 (TX)	[USA] only
D20	1790000620	S.DIODE	MA77 (TX)	
D21	1790000620	S.DIODE	MA77 (TX)	
D23	1730000410	S.ZENER	RD5.1M-T2B2	
D24	1730000410	S.ZENER	RD5.1M-T2B2	
D26	1750000270	S.DIODE	1SS301 (TE85R)	
D27	1790000620	S.DIODE	MA77 (TX)	
D50	1790000620	S.DIODE	MA77 (TX)	
D51	1790000620	S.DIODE	MA77 (TX)	
D52	1750000270	S.DIODE	1SS301 (TE85R)	
D54	1790000620	S.DIODE	MA77 (TX)	
D55	1790000620	S.DIODE	MA77 (TX)	
D56	1790001640	S.DIODE	1SS373 (TPH3)	
D59	1790001640	S.DIODE	1SS373 (TPH3)	
D60	1790001640	S.DIODE	1SS373 (TPH3)	
D61	1750000270	S.DIODE	1SS301 (TE85R)	
D62	1750000290	S.DIODE	1SS300 (TE85R)	
D63	1750000270	S.DIODE	1SS301 (TE85R)	
D66	1790001130	S.DIODE	D2FS4-4063	
D67	1790001640	S.DIODE	1SS373 (TPH3)	
D68	1790001640	S.DIODE	1SS373 (TPH3)	
D69	1790000620	S.DIODE	MA77 (TX)	
D70	1790001640	S.DIODE	1SS373 (TPH3)	
D71	1790000620	S.DIODE	MA77 (TX)	
D72	1750000270	S.DIODE	1SS301 (TE85R)	
D73	1750000270	S.DIODE	1SS301 (TE85R)	
D75	1750000270	S.DIODE	1SS301 (TE85R)	
D76	1790001640	S.DIODE	1SS373 (TPH3)	
X1	6050009890	S.XTAL	CR-569 (6.144 MHz)	
X2	6050009870	S.XTAL	CR-567 (9.8304 MHz)	
L1	6200003260	S.COIL	NL 322522T-101J	
L2	6200003260	S.COIL	NL 322522T-101J	
L3	6200003260	S.COIL	NL 322522T-101J	
L4	6200003260	S.COIL	NL 322522T-101J	
L5	6200003260	S.COIL	NL 322522T-101J	
L6	6200003260	S.COIL	NL 322522T-101J	
L7	6200003260	S.COIL	NL 322522T-101J	
L8	6200003260	S.COIL	NL 322522T-101J	
L9	6200001830	S.COIL	NL 322522T-100J	
L10	6200001830	S.COIL	NL 322522T-100J	
L11	6200003260	S.COIL	NL 322522T-101J	
L12	6200003260	S.COIL	NL 322522T-101J	
L13	6200003260	S.COIL	NL 322522T-101J	
L14	6200003260	S.COIL	NL 322522T-101J	
L15	6200003260	S.COIL	NL 322522T-101J	
L16	6200003260	S.COIL	NL 322522T-101J	
L17	6200001830	S.COIL	NL 322522T-100J	
L19	6200003260	S.COIL	NL 322522T-101J	
L21	6200003260	S.COIL	NL 322522T-101J	
L22	6200003260	S.COIL	NL 322522T-101J	
L24	6200003260	S.COIL	NL 322522T-101J	
L25	6200003260	S.COIL	NL 322522T-101J	
L27	6200001830	S.COIL	NL 322522T-100J	
L28	6140002220	COIL	LR-270	
L29	6190000220	COIL	S0971136-101K	
L30	6200003260	S.COIL	NL 322522T-101J	
L31	6200003260	S.COIL	NL 322522T-101J	
L32	6200003260	S.COIL	NL 322522T-101J	
L35	6140002220	COIL	LR-270	

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
L36	6200003260	S.COIL	NL 322522T-101J
L37	6180000990	COIL	LAL 04NA 101K
L38	6200003950	S.COIL	HF50ACC 322513-T
L39	6200003950	S.COIL	HF50ACC 322513-T
L40	6200003950	S.COIL	HF50ACC 322513-T
L41	6200003950	S.COIL	HF50ACC 322513-T
L42	6200003950	S.COIL	HF50ACC 322513-T
L43	6200003950	S.COIL	HF50ACC 322513-T
L44	6200003950	S.COIL	HF50ACC 322513-T
L45	6200003950	S.COIL	HF50ACC 322513-T
L46	6200003950	S.COIL	HF50ACC 322513-T
L47	6200003950	S.COIL	HF50ACC 322513-T
L48	6200003950	S.COIL	HF50ACC 322513-T
L49	6200003260	S.COIL	NL 322522T-101J
L50	6200003950	S.COIL	HF50ACC 322513-T
L51	6200003260	S.COIL	NL 322522T-101J
L52	6200003260	S.COIL	NL 322522T-101J
L54	6200003950	S.COIL	HF50ACC 322513-T
L55	6200003950	S.COIL	HF50ACC 322513-T
L56	6200003950	S.COIL	HF50ACC 322513-T
L57	6200003950	S.COIL	HF50ACC 322513-T
L58	6200003950	S.COIL	HF50ACC 322513-T
L59	6200003950	S.COIL	HF50ACC 322513-T
L60	6200003950	S.COIL	HF50ACC 322513-T
L61	6200003950	S.COIL	HF50ACC 322513-T
L62	6200003950	S.COIL	HF50ACC 322513-T
L63	6200003950	S.COIL	HF50ACC 322513-T
L64	6200003950	S.COIL	HF50ACC 322513-T
L65	6200003950	S.COIL	HF50ACC 322513-T
L66	6200003950	S.COIL	HF50ACC 322513-T
L67	6200003950	S.COIL	HF50ACC 322513-T
L68	6200003950	S.COIL	HF50ACC 322513-T
L69	6200003950	S.COIL	HF50ACC 322513-T
L70	6200003950	S.COIL	HF50ACC 322513-T
L71	6200003950	S.COIL	HF50ACC 322513-T
L72	6200003950	S.COIL	HF50ACC 322513-T
L73	6200003950	S.COIL	HF50ACC 322513-T
L74	6200003950	S.COIL	HF50ACC 322513-T
L75	6200003260	S.COIL	NL 322522T-101J
L76	6200003260	S.COIL	NL 322522T-101J
L77	6200001830	S.COIL	NL 322522T-100J
L78	6200001830	S.COIL	NL 322522T-100J
L79	6200001830	S.COIL	NL 322522T-100J
L80	6910003570	COIL	2943-666663
L81	6200003260	S.COIL	NL 322522T-101J
L82	6200003260	S.COIL	NL 322522T-101J
L100	6200003260	S.COIL	NL 322522T-101J
L101	6200003260	S.COIL	NL 322522T-101J
L104	6200003950	S.COIL	HF50ACC 322513-T
L105	6200003950	S.COIL	HF50ACC 322513-T
L106	6200003950	S.COIL	HF50ACC 322513-T
L107	6910003570	COIL	2943-666663
L108	6910003570	COIL	2943-666663
L109	6200003260	S.COIL	NL 322522T-101J
L110	6200003260	S.COIL	NL 322522T-101J
L111	6200003950	S.COIL	HF50ACC 322513-T
L113	6200003260	S.COIL	NL 322522T-101J
L114	6180000900	COIL	LAL 03NA 101K
L115	6180000880	COIL	LAL 03NA 100K
L116	6180000880	COIL	LAL 03NA 100K
L117	6200003260	S.COIL	NL 322522T-101J
L118	6200003260	S.COIL	NL 322522T-101J
L119	6200003260	S.COIL	NL 322522T-101J
L120	6200003260	S.COIL	NL 322522T-101J
L121	6200003950	S.COIL	HF50ACC 322513-T
L122	6200003950	S.COIL	HF50ACC 322513-T
L123	6200003260	S.COIL	NL 322522T-101J
L124	6200003260	S.COIL	NL 322522T-101J
R1	7030003840	S.RESISTOR	ERJ3GEYJ 225 V (2.2 MΩ)
R2	7030003740	S.RESISTOR	ERJ3GEYJ 334 V (330 kΩ)
R3	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R4	7310002580	S.TRIMMER	RV-108 (RH03A3A15X05A) 104
R5	7310002840	S.TRIMMER	RV-160 (RH03A3A16) 105
R6	7310002580	S.TRIMMER	RV-108 (RH03A3A15X05A) 104
R7	7030003570	S.RESISTOR	ERJ3GEYJ 123 V (12 kΩ)
R9	7030003840	S.RESISTOR	ERJ3GEYJ 225 V (2.2 MΩ)
R10	7030003750	S.RESISTOR	ERJ3GEYJ 394 V (390 kΩ)
R11	7030003810	S.RESISTOR	ERJ3GEYJ 125 V (1.2 MΩ)
R12	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R13	7030003810	S.RESISTOR	ERJ3GEYJ 125 V (1.2 MΩ)

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R14	7030003690	S.RESISTOR	ERJ3GEYJ 124 V (120 kΩ)
R15	7310002740	S.TRIMMER	RV-150 (RH03A3A14X0FC) 103
R22	7310002580	S.TRIMMER	RV-108 (RH03A3A15X05A) 104
R23	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R24	7030003750	S.RESISTOR	ERJ3GEYJ 394 V (390 kΩ)
R25	7030003750	S.RESISTOR	ERJ3GEYJ 394 V (390 kΩ)
R26	7310002820	S.TRIMMER	RV-158 (RH03A3AS5) 474
R27	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R28	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R29	7030003750	S.RESISTOR	ERJ3GEYJ 394 V (390 kΩ)
R30	7030003750	S.RESISTOR	ERJ3GEYJ 394 V (390 kΩ)
R31	7310002820	S.TRIMMER	RV-158 (RH03A3AS5) 474
R32	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R33	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R34	7030003730	S.RESISTOR	ERJ3GEYJ 274 V (270 kΩ)
R35	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)
R37	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R38	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R39	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R44	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R45	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R46	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R47	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R48	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R49	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R50	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R51	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R52	7030006060	S.RESISTOR	ERJ12YJ100H (10 Ω)
R53	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R54	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R55	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R56	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R57	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R58	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R59	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R60	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R61	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R62	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R63	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R64	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)
R65	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R66	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)
R67	7030003570	S.RESISTOR	ERJ3GEYJ 123 V (12 kΩ)
R68	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R69	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R70	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R71	7030006220	S.RESISTOR	ERJ12YJ470H (47 Ω)
R73	7030008170	S.RESISTOR	ERJ12YJ1R0H (1 Ω)
R75	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R76	7030003510	S.RESISTOR	ERJ3GEYJ 392 V (3.9 kΩ)
R77	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R78	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R79	7030003810	S.RESISTOR	ERJ3GEYJ 125 V (1.2 MΩ)
R80	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R82	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R83	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R84	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R85	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R86	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R87	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R88	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R89	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R90	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R91	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R92	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R93	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R94	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R95	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R96	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R97	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R98	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R99	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R100	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R101	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R102	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R103	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R104	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R105	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R106	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R107	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R108	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R109	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R110	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R111	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R112	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R113	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R114	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R115	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R116	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R117	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R118	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R119	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)
R120	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R121	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R122	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)
R123	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R124	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R125	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R126	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R127	7030003840	S.RESISTOR	ERJ3GEYJ 225 V (2.2 MΩ)
R128	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R130	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ)
R132	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R133	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
R135	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R136	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)
R137	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R139	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R140	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R141	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R142	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R143	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R144	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R145	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R146	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R147	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R148	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R149	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R150	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R151	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R152	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R153	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R155	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R157	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R158	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R159	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R160	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R161	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R162	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R163	7030003420	S.RESISTOR	ERJ3GEYJ 681 V (680 Ω)
R164	7030003260	S.RESISTOR	ERJ3GEYJ 330 V (33 Ω)
R165	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R166	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R167	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R170	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R171	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R172	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R173	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R174	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R175	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R176	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R177	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R178	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R179	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R180	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R181	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R182	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R183	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R184	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R185	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R186	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R187	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R188	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R189	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R190	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R191	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R192	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R193	7030000420	S.RESISTOR	MCR10EZHJ 2.2 kΩ
R194	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R196	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R197	7310002760	S.TRIMMER	RV-152 (RH03A3AJ4X0HA) 223
R198	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R199	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R200	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R201	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R202	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R203	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R204	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R205	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R206	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R207	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R208	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R209	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R210	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R211	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R212	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R213	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R222	7010006930	RESISTOR	PSD1/4 470 Ω
R223	7010006930	RESISTOR	PSD1/4 470 Ω
R224	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R225	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R226	7310003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R227	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R228	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R229	7030003820	S.RESISTOR	ERJ3GEYJ 155 V (1.5 MΩ)
R230	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R231	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R232	7010000990	RESISTOR	R25XJ 47 Ω
R233	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R234	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R222	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R223	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R229	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ)
R235	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R237	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
R238	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R240	7310002840	S.TRIMMER	RV-160 (RH03A3A16) 105
R241	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
C1	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C2	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C3	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C5	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C6	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C8	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C13	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C14	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C17	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C18	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C19	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C20	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C21	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C22	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C23	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C25	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C26	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C28	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C29	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C31	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C33	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C34	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C35	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C36	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C37	4510004640	S.ELECTROLYTIC	ECEV1CA470SP
C38	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C39	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C40	4510004640	S.ELECTROLYTIC	ECEV1CA470SP
C41	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C43	4030009580	S.CERAMIC	C1608 JB 1H 681K-T-A
C44	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C45	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C46	4510006240	S.ELECTROLYTIC	ECEV1CA221P
C47	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
C48	4510006670	S.ELECTROLYTIC	ECEV 1CA 471P
C49	4510006670	S.ELECTROLYTIC	ECEV 1CA 471P
C50	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
C51	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
C52	4510004640	S.ELECTROLYTIC	ECEV1CA470SP
C53	4510004640	S.ELECTROLYTIC	ECEV1CA470SP
C54	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C55	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C56	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C57	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C59	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C60	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C61	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C64	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C65	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C66	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C67	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C68	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C69	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C70	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C71	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C72	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C73	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C74	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C75	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C76	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C77	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C78	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C79	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C80	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C81	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C82	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C83	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C84	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C85	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C86	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C87	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C88	4030009660	S.CERAMIC	C1608 JF 1C 224Z-T-A
C89	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C90	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C92	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C93	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C94	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C95	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C96	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C97	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C98	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C99	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C100	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C101	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C102	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C103	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C104	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C105	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C106	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C107	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C108	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C109	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C110	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C111	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C112	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C113	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C114	4030011340	S.CERAMIC	C1608 CH 1H 471J-T-A
C115	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C121	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C122	4030010110	S.CERAMIC	C1608 SL 1H 471J-T-A
C123	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C124	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C125	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C126	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C201	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C202	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C203	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C204	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C205	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C206	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C207	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C208	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C209	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C210	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C211	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C212	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C213	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C214	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C215	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C216	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C219	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C220	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C221	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C222	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C223	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C224	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C225	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C226	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C227	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C228	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C229	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C230	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C231	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C232	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C223	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C233	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C234	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C235	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C236	4510003840	ELECTROLYTIC	50 MV 1 SWB
C237	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
RL2	6330001320	RELAY	AHY103
RL3	6330001320	RELAY	AHY103
J2	6510019140	S.CONNECTOR	52610-1090
J3	6510003450	CONNECTOR	B09B-EH-S
J4	6510003480	CONNECTOR	B12B-EH-S
J6	6510003410	CONNECTOR	B05B-EH-S
J8	6510003490	CONNECTOR	B13B-EH-S
J9	6510003410	CONNECTOR	B05B-EH-S
J10	6510003450	CONNECTOR	B09B-EH-S
J14	6510017650	CONNECTOR	52045-1045
J17	6510003390	CONNECTOR	B03B-EH-S
J18	6510003410	CONNECTOR	B05B-EH-S
J19	6510003420	CONNECTOR	B06B-EH-S
J20	6510003430	CONNECTOR	B07B-EH-S
J21	6510003440	CONNECTOR	B08B-EH-S
J22	6510003390	CONNECTOR	B03B-EH-S
S3	2260002220	SWITCH	S-1010A
S4	2260002220	SWITCH	S-1010A
S5	2220000530	S.SWITCH	SW-161
EP1	0910051090	PCB	B 4891J

[FILTER UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
D2	1710000470	DIODE	1S955
D4	1710000470	DIODE	1S955
D6	1710000470	DIODE	1S955
D8	1710000470	DIODE	1S955
D10	1710000470	DIODE	1S955
D12	1710000470	DIODE	1S955
D14	1710000470	DIODE	1S955
D15	1710000980	DIODE	MBD701
D16	1710000980	DIODE	MBD701
D17	1710000470	DIODE	1S955
D18	1710000470	DIODE	1S955
L1	6110003450	COIL	LA-539
L2	6110002280	COIL	LA-405
L3	6110003430	COIL	LA-540
L4	6110002250	COIL	LA-402
L6	6110003420	COIL	LA-541
L7	6140001900	COIL	LR-200
L8	6140001910	COIL	LR-201
L9	6140001890	COIL	LR-198
L10	6140001940	COIL	LR-199
L11	6140003330	COIL	LR-369
L12	6140003340	COIL	LR-370
L13	6140001860	COIL	LR-195
L14	6140001850	COIL	LR-194
L15	6180001220	COIL	LAL 04NA 100K
L16	6180001220	COIL	LAL 04NA 100K
L17	6180001220	COIL	LAL 04NA 100K
L18	6180000990	COIL	LAL 04NA 101K
L19	6180000990	COIL	LAL 04NA 101K
L20	6180000990	COIL	LAL 04NA 101K

S.=Surface mount

[FILTER UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
L21	6180000990	COIL	LAL 04NA 101K
L22	6140001000	COIL	LR-123
L23	6180000990	COIL	LAL 04NA 101K
L27	6110003440	COIL	LA-538
L28	6110003460	COIL	LA-537
L29	6110003460	COIL	LA-537
L30	6180001220	COIL	LAL 04NA 100K
L31	6110002260	COIL	LA-403
L32	6180000990	COIL	LAL 04NA 101K
L33	6910000670	COIL	BL01RN1-A62-001
R2	7010004320	RESISTOR	R20J 10 kΩ
R3	7010004320	RESISTOR	R20J 10 kΩ
R4	7010004320	RESISTOR	R20J 10 kΩ
R5	7010004320	RESISTOR	R20J 10 kΩ
R7	7030007360	S.RESISTOR	ERJ1WYJ470H (47 Ω)
R8	7030007360	S.RESISTOR	ERJ1WYJ470H (47 Ω)
R9	7030007360	S.RESISTOR	ERJ1WYJ470H (47 Ω)
R10	7030007360	S.RESISTOR	ERJ1WYJ470H (47 Ω)
R11	7010004320	RESISTOR	R20J 10 kΩ
R12	7010004320	RESISTOR	R20J 10 kΩ
R13	7030007360	S.RESISTOR	ERJ1WYJ470H (47 Ω)
R14	7030007360	S.RESISTOR	ERJ1WYJ470H (47 Ω)
R15	7540000050	ABSORBER	DSA-701MA
C1	4010004770	CERAMIC	DE0910 SL 390J 6KV
C4	4010005130	CERAMIC	DE0910 SL 470J 6KV
C5	4010005130	CERAMIC	DE0910 SL 470J 6KV
C6	4010004770	CERAMIC	DE0910 SL 390J 6KV
C7	4010004760	CERAMIC	DE0910 SL 330J 6KV
C8	4010004770	CERAMIC	DE0910 SL 390J 6KV
C9	4010004800	CERAMIC	DE1210 SL 820J 6KV
C10	4010004790	CERAMIC	DE1210 SL 680J 6KV
C11	4010004780	CERAMIC	DE1010 SL 560J 6KV
C12	4010004810	CERAMIC	DE1310 SL 101J 6KV
C13	4010004780	CERAMIC	DE1010 SL 560J 6KV
C14	4010004780	CERAMIC	DE1010 SL 560J 6KV
C15	4010004780	CERAMIC	DE1010 SL 560J 6KV
C16	4010004770	CERAMIC	DE0910 SL 390J 6KV
C18	4010004800	CERAMIC	DE1210 SL 820J 6KV
C19	4010004780	CERAMIC	DE1010 SL 560J 6KV
C20	4010004790	CERAMIC	DE1210 SL 680J 6KV
C23	4010004800	CERAMIC	DE1210 SL 820J 6KV
C24	4010004800	CERAMIC	DE1210 SL 820J 6KV
C25	4010004820	CERAMIC	DE1410 SL 121J 6KV
C26	4010004830	CERAMIC	DE1510 SL 151J 6KV
C27	4010004830	CERAMIC	DE1510 SL 151J 6KV
C28	4010004830	CERAMIC	DE1510 SL 151J 6KV
C29	4010004820	CERAMIC	DE1410 SL 121J 6KV
C30	4010004820	CERAMIC	DE1410 SL 121J 6KV
C31	4010004810	CERAMIC	DE1310 SL 101J 6KV
C32	4010004810	CERAMIC	DE1310 SL 101J 6KV
C33	4010005130	CERAMIC	DE0910 SL 470J 6KV
C34	4010004820	CERAMIC	DE1410 SL 121J 6KV
C35	4010004290	CERAMIC	DE1310 SL 181J 3KV
C36	4010004830	CERAMIC	DE1510 SL 151J 6KV
C37	4010004830	CERAMIC	DE1510 SL 151J 6KV
C38	4010004830	CERAMIC	DE1510 SL 151J 6KV
C39	4010004290	CERAMIC	DE1310 SL 181J 3KV
C40	4010004290	CERAMIC	DE1310 SL 181J 3KV
C41	4010004750	CERAMIC	DE1510 SL 151J 6KV
C42	4010004810	CERAMIC	DE1310 SL 101J 6KV
C43	4010004740	CERAMIC	DE1207 SL 271J 2KV
C44	4010004300	CERAMIC	DE1410 SL 221J 3KV
C45	4010004740	CERAMIC	DE1207 SL 271J 2KV
C46	4010004740	CERAMIC	DE1207 SL 271J 2KV
C47	4010004830	CERAMIC	DE1510 SL 151J 6KV
C48	4010004830	CERAMIC	DE1510 SL 151J 6KV
C49	4320000640	DIP MICA	DM20C681J5-N
C50	4320000640	DIP MICA	DM20C681J5-N
C51	4010004300	CERAMIC	DE1410 SL 221J 3KV
C52	4010004300	CERAMIC	DE1410 SL 221J 3KV
C53	4010004300	CERAMIC	DE1410 SL 221J 3KV
C54	4010004300	CERAMIC	DE1410 SL 221J 3KV
C55	4320000640	DIP MICA	DM20C681J5-N
C56	4320000640	DIP MICA	DM20C681J5-N
C58	4040000150	BARRIER	UAT 05X 472K
C60	4040000150	BARRIER	UAT 05X 472K
C62	4040000150	BARRIER	UAT 05X 472K
C64	4040000150	BARRIER	UAT 05X 472K

[FILTER UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C66	4040000150	BARRIER	UAT 05X 472K
C68	4040000150	BARRIER	UAT 05X 472K
C70	4040000150	BARRIER	UAT 05X 472K
C71	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C72	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C73	4610001220	TRIMMER	CVE101-56 (100P)
C74	4030005040	S.CERAMIC	C2012 CH 1H 271J-T-A
C75	4040000150	BARRIER	UAT 05X 472K
C76	4010005080	CERAMIC	DE0707 SL 470J 3KV
C77	4010005070	CERAMIC	DE0707 SL 390J 3KV
C78	4010005110	CERAMIC	DE0910 SL 220J 6KV
C79	4010004760	CERAMIC	DE0910 SL 330J 6KV
C80	4010004310	CERAMIC	DE0705 SL 100D 1KV
C81	4010004310	CERAMIC	DE0705 SL 100D 1KV
C83	4010005030	CERAMIC	DE0707 SL 120J 3KV
C86	4010005030	CERAMIC	DE0707 SL 120J 3KV
C87	4010005030	CERAMIC	DE0707 SL 120J 3KV
C88	4010005110	CERAMIC	DE0910 SL 220J 6KV
C89	4010005030	CERAMIC	DE0707 SL 120J 3KV
C90	4010005030	CERAMIC	DE0707 SL 120J 3KV
C91	4010005030	CERAMIC	DE0707 SL 120J 3KV
C95	4010004710	CERAMIC	DE0707 SL 150J 3KV
C96	4010005030	CERAMIC	DE0707 SL 120J 3KV
C98	4010004700	CERAMIC	DE0707 SL 220J 3KV
C100	4010000500	CERAMIC	DD104 B 102K 50V
C101	4040000150	BARRIER	UAT 05X 472K
C102	4040000150	BARRIER	UAT 05X 472K
C103	4040000150	BARRIER	UAT 05X 472K
C104	4040000150	BARRIER	UAT 05X 472K
C107	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C108	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C110	4010004820	CERAMIC	DE1410 SL 121J 6KV
C112	4010004800	CERAMIC	DE1210 SL 820J 6KV
C115	4010006900	CERAMIC	HE80SJ YB 472K 50V
C116	4010004770	CERAMIC	DE0910 SL 390J 6KV
C117	4010004750	CERAMIC	DE1510 SL 151J 6KV
C118	4010005120	CERAMIC	DE0910 SL 270J 6KV
C119	4010005120	CERAMIC	DE0910 SL 270J 6KV
C120	4010005030	CERAMIC	DE0707 SL 120J 3KV
C123	4010005030	CERAMIC	DE0707 SL 120J 3KV
C124	4010004800	CERAMIC	DE1210 SL 820J 6KV
C125	4010004800	CERAMIC	DE1210 SL 820J 6KV
C126	4010004790	CERAMIC	DE1210 SL 680J 6KV
C128	4010005030	CERAMIC	DE0707 SL 120J 3KV
C129	4010005030	CERAMIC	DE0707 SL 120J 3KV
C130	4010005030	CERAMIC	DE0707 SL 120J 3KV
C131	4010004290	CERAMIC	DE1310 SL 181J 3KV
C133	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C134	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C135	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C136	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C137	4010004770	CERAMIC	DE0910 SL 390J 6KV
C138	4010004300	CERAMIC	DE1410 SL 221J 3KV
C139	4010004300	CERAMIC	DE1410 SL 221J 3KV
C140	4010004300	CERAMIC	DE1410 SL 221J 3KV
C141	4010004300	CERAMIC	DE1410 SL 221J 3KV
C142	4010004300	CERAMIC	DE1410 SL 221J 3KV
C143	4010004300	CERAMIC	DE1410 SL 221J 3KV
RL1	6330000201	RELAY	VS-12TBU-E-UC
RL2	6330000201	RELAY	VS-12TBU-E-UC
RL3	6330000201	RELAY	VS-12TBU-E-UC
RL4	6330000201	RELAY	VS-12TBU-E-UC
RL5	6330000201	RELAY	VS-12TBU-E-UC
RL6	6330000201	RELAY	VS-12TBU-E-UC
RL7	6330000201	RELAY	VS-12TBU-E-UC
RL8	6330000201	RELAY	VS-12TBU-E-UC
RL9	6330000201	RELAY	VS-12TBU-E-UC
RL10	6330000201	RELAY	VS-12TBU-E-UC
RL11	6330000201	RELAY	VS-12TBU-E-UC
RL12	6330000201	RELAY	VS-12TBU-E-UC
RL13	6330000201	RELAY	VS-12TBU-E-UC
RL14	6330000201	RELAY	VS-12TBU-E-UC
RL15	6330001500	RELAY	AW3033
RL16	6330001210	RELAY	VB-12TBU-UC (UL3)
RL17	6330001210	RELAY	VB-12TBU-UC (UL3)

S.=Surface mount

[FILTER UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
WS1	8600035753	M.OTHER	EX1900 P01*J01FI-3
WS2	8970022640	M.OTHER	EX1900 1.5D COAXIAL (1)/FI
WS3	8970022650	M.OTHER	EX1900 TEFLON COAXIAL (1)/FI
WS5	8970023250	M.OTHER	EX1900 J LEAD SET (1)/FI
EP1	6910011330	TERMINAL	OT-009 M3
EP2	6910011330	TERMINAL	OT-009 M3
EP3	6910011330	TERMINAL	OT-009 M3
EP4	6910011330	TERMINAL	OT-009 M3
EP5	0910048749	PCB	B 4888I

[COMBINR UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
D1	1710000040	DIODE	1S953
D2	1710000040	DIODE	1S953
D3	1710000040	DIODE	1S953
L1	6140000970	COIL	LR-119
L2	6140000970	COIL	LR-119
L3	6140001950	COIL	LR-211
L5	6140003290	COIL	LR-365
R1	7070000830	RESISTOR	ERG3SJ 101 (100 Ω)
R2	7070000830	RESISTOR	ERG3SJ 101 (100 Ω)
R3	7010004070	RESISTOR	R20J 100 Ω
R4	7010003950	RESISTOR	R20J 10 Ω
R5	7010003950	RESISTOR	R20J 10 Ω
R6	7100000580	RESISTOR	SRW7P-M 50 Ω (500)
R7	7010003910	RESISTOR	R20J 4.7 Ω
R8	7010003970	RESISTOR	R20J 15 Ω
R9	7010003950	RESISTOR	R20J 10 Ω
R10	7010003950	RESISTOR	R20J 10 Ω
R11	7010004070	RESISTOR	R20J 100 Ω
C1	4040000690	BARRIER	UAT 08X 473K
C2	4040000690	BARRIER	UAT 08X 473K
C3	4010004790	CERAMIC	DE1210 SL 680J 6KV
C4	4010004790	CERAMIC	DE1210 SL 680J 6KV
C5	4010005110	CERAMIC	DE0910 SL 220J 6KV
C6	4010005110	CERAMIC	DE0910 SL 220J 6KV
C7	4030005050	S.CERAMIC	C2012 CH 1H 331J-T-A
C8	4030005050	S.CERAMIC	C2012 CH 1H 331J-T-A
J1	6510017920	CONNECTOR	1811P342
J2	6510017920	CONNECTOR	1811P342
J3	6510017920	CONNECTOR	1811P342
J4	6510017920	CONNECTOR	1811P342
J5	6510003080	CONNECTOR	RT01T-1.0B
J6	6510003080	CONNECTOR	RT01T-1.0B
J7	6510003080	CONNECTOR	RT01T-1.0B
WS1	8970022610	M.OTHER	EX1900 0.8D COAXIAL (3)/CO
WS2	8600035730	M.OTHER	EX1900 P01*J08CO
EP1	6910011330	TERMINAL	OT-009 M3
EP2	6910011330	TERMINAL	OT-009 M3
EP3	0910048756	PCB	B 4889F
EP5	0910049250	PCB	B 5039

[SPLITR UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1180001250	S.IC	TA7808F (TE16L)
D1	1750000270	S.DIODE	1SS301 (TE85R)
D2	1750000270	S.DIODE	1SS301 (TE85R)
D3	1790000490	S.DIODE	HSM88AS-TR
D4	1710000950	DIODE	RG3D
D5	1710000950	DIODE	RG3D
L1	6200003260	S.COIL	NL 322522T-101J
L2	6140000970	COIL	LR-119
L3	6140000970	COIL	LR-119
L4	6140001000	COIL	LR-123
L5	6180000900	COIL	LAL 03NA 101K
L6	6140001000	COIL	LR-123
L7	6200003260	S.COIL	NL 322522T-101J
L8	6200003260	S.COIL	NL 322522T-101J
L9	6200003260	S.COIL	NL 322522T-101J
L10	6200003260	S.COIL	NL 322522T-101J
L11	6200003260	S.COIL	NL 322522T-101J
R1	7070000591	RESISTOR	ERG1SJ 333 (33 kΩ)
R2	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R3	7100000580	RESISTOR	SRW7P-M 50 Ω (500)
R4	7100000580	RESISTOR	SRW7P-M 50 Ω (500)
R5	7100000580	RESISTOR	SRW7P-M 50 Ω (500)
R6	7100000580	RESISTOR	SRW7P-M 50 Ω (500)
R7	7030008020	S.RESISTOR	ERJ12YJ472H (4.7 kΩ)
R8	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R9	7030006180	S.RESISTOR	ERJ1WYJ101H (100 Ω)
R10	7030006180	S.RESISTOR	ERJ1WYJ101H (100 Ω)
R11	7030006070	S.RESISTOR	ERJ12YJ101H (100 Ω)
R12	7030006070	S.RESISTOR	ERJ12YJ101H (100 Ω)
R13	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R14	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)
R15	7030003690	S.RESISTOR	ERJ3GEYJ 124 V (120 kΩ)
R16	7510000140	THERMISTOR	ERT-D2FHL 802S
R17	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R18	7030006210	S.RESISTOR	ERJ12YJ4R7H (4.7 Ω)
C1	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C2	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C3	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C4	4510005840	S.ELECTROLYTIC	ECEV1HANR47R
C5	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C7	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A
C8	4010006900	CERAMIC	HE80SJ YB 472K 50V
C9	4510006880	ELECTROLYTIC	100 MV 33 CZ
C10	4010006900	CERAMIC	HE80SJ YB 472K 50V
C11	4010005740	CERAMIC	HM60SJ SL 560J 500V
C14	4010005740	CERAMIC	HM60SJ SL 560J 500V
C17	4010005740	CERAMIC	HM60SJ SL 560J 500V
C18	4010005610	CERAMIC	HM60SJ SL 100D 500V
C19	4010005690	CERAMIC	HM60SJ SL 300J 500V
C20	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C21	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C22	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C23	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C24	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C25	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C26	4010005370	CERAMIC	HM11SJ SL 331J 500V
RL1	6330001330	RELAY	AG 201344
RL2	6330000470	RELAY	NR-HD (12V) AE5343
J1	6510007020	CONNECTOR	TMP-J01X-V6
J2	6510007020	CONNECTOR	TMP-J01X-V6
J4	6510007020	CONNECTOR	TMP-J01X-V6
J5	6510007020	CONNECTOR	TMP-J01X-V6
J6	6510007020	CONNECTOR	TMP-J01X-V6
J7	6510007020	CONNECTOR	TMP-J01X-V6
J8	6510007020	CONNECTOR	TMP-J01X-V6
J11	6510019970	S.CONNECTOR	52808-1090
WS1	8600035721	M.OTHER	EX1900 P01*J03*09SP-1

S.=Surface mount

[SPLITR UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
EP1	0910048784	PCB	B 4890D
EP2	9034901004	TUBE	D=1.0, L=10 mm
EP3	9050409902	TUBE	D=1.0, L=15 mm
EP4	9019000830	TUBE	PLASTIC TUBE D=6.0, L=750 mm
EP5	9001602001	TUBE	IRRAX 0.7 (d) L=10 mm

[PA UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
Q1	1560001000	FET	MRF150MP (SRFJ150MP) PAIR
Q2	1560001000	FET	MRF150MP (SRFJ150MP) PAIR
Q3	1560001000	FET	MRF150MP (SRFJ150MP) PAIR
Q4	1560001000	FET	MRF150MP (SRFJ150MP) PAIR
MF1	2710000620	FAN	PUDC12Z4-992
MF2	2710000620	FAN	PUDC12Z4-992
MF3	2710000620	FAN	PUDC12Z4-992
W1	8900006990	CABLE	OPC-683
W2	8900007360	CABLE	OPC-711
W3	8900006990	CABLE	OPC-683
W4	8900007360	CABLE	OPC-711
WS1	8970022930	M.OTHER	EX1900 J BOARD SET (4)/PA

[PA-1 BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
D1	1750000270	S.DIODE	1SS301 (TE85R)
D2	1750000270	S.DIODE	1SS301 (TE85R)
D3	1750000270	S.DIODE	1SS301 (TE85R)
D4	1750000270	S.DIODE	1SS301 (TE85R)
L1	6110001730	COIL	LA-262
L2	6140003040	COIL	LR-322B
L3	6140002590	COIL	LR-296
L4	6140000720	COIL	LR-95
L5	6180000900	COIL	LAL 03NA 101K
L6	6180000900	COIL	LAL 03NA 101K
L7	6140002030	COIL	LR-230
L9	6200003260	S.COIL	NL 322522T-101J
L11	6200003950	S.COIL	HF50ACC 322513-T
R2	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R4	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R5	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R6	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R7	7030006140	S.RESISTOR	ERJ1WYJ560H (56 Ω)
R8	7030006140	S.RESISTOR	ERJ1WYJ560H (56 Ω)
R9	7310003180	TRIMMER	EVN-2ACA00 B24 (203)
R10	7310003180	TRIMMER	EVN-2ACA00 B24 (203)
R11	7070000900	RESISTOR	ERX3SJ 1R8 (1.8 Ω)
R12	7070000900	RESISTOR	ERX3SJ 1R8 (1.8 Ω)
R15	7070000960	RESISTOR	ERG3SJ 561 (560 Ω)
R16	7080001300	RESISTOR	ERG3SJ 270 (27 Ω)
R17	7070000940	RESISTOR	ERG3SJ 331 (330 Ω)
R18	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R19	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R20	7070000930	RESISTOR	ERG3SJ 330 (33 Ω)
R21	7070001000	RESISTOR	ERG3SJ 821 (820 Ω)
R23	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R24	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)

[PA-1 BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
C1	4010005740	CERAMIC	HM60SJ SL 560J 500V
C3	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C4	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C11	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C13	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C16	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C17	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C18	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C19	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C23	4510006830	ELECTROLYTIC	63 MV 470CZ
C24	4510006830	ELECTROLYTIC	63 MV 470CZ
C25	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C26	4030003410	S.CERAMIC	GRM42-6 B 473K 50PT
C27	4030001170	S.CERAMIC	GRM42-6 B 102K 50PT
C29	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C35	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C37	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C40	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C41	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C42	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C43	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C44	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C45	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C46	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C51	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C52	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C55	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C56	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C57	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
J2	6510017920	CONNECTOR	1811P342
J3	6510019970	S.CONNECTOR	52808-1090
J4	6510019970	S.CONNECTOR	52808-1090
J5	6510003390	CONNECTOR	B03B-EH-S
W6	7030003860	S.JUMPER	ERJ3GE JPW V
WS1	8970022531	M.OTHER	EX1900 J BOARD SET-1 (1)/PA-1
WS2	8970022540	M.OTHER	EX1900 1.5D COAXIAL (1)/PA-1
EP1	6910011330	TERMINAL	OT-009 M3
EP2	6910011330	TERMINAL	OT-009 M3
EP3	6910000640	BEAD	FSOH090RN
EP4	0910048706	PCB	B 4884F

[PA-2 BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
D1	1750000270	S.DIODE	1SS301 (TE85R)
D2	1750000270	S.DIODE	1SS301 (TE85R)
D3	1750000270	S.DIODE	1SS301 (TE85R)
D4	1750000270	S.DIODE	1SS301 (TE85R)
L1	6110001730	COIL	LA-262
L2	6140003040	COIL	LR-322B
L3	6140002590	COIL	LR-296
L4	6140000720	COIL	LR-95
L5	6180000900	COIL	LAL 03NA 101K
L6	6180000900	COIL	LAL 03NA 101K
L7	6140002030	COIL	LR-230
L9	6200003260	S.COIL	NL 322522T-101J
L11	6200003950	S.COIL	HF50ACC 322513-T
R2	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R4	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R5	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R6	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R7	7030006140	S.RESISTOR	ERJ1WYJ560H (56 Ω)
R8	7030006140	S.RESISTOR	ERJ1WYJ560H (56 Ω)
R9	7310003180	TRIMMER	EVN-2ACA00 B24 (203)

S.=Surface mount

[PA-2 BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
R10	7310003180	TRIMMER	EVN-2ACA00 B24 (203)
R11	7070000900	RESISTOR	ERX3SJ 1R8 (1.8 Ω)
R12	7070000900	RESISTOR	ERX3SJ 1R8 (1.8 Ω)
R15	7070000960	RESISTOR	ERG3SJ 561 (560 Ω)
R16	7080001300	RESISTOR	ERG3SJ 270 (27 Ω)
R17	7070000940	RESISTOR	ERG3SJ 331 (330 Ω)
R18	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R19	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R20	7070000930	RESISTOR	ERG3SJ 330 (33 Ω)
R21	7070001000	RESISTOR	ERG3SJ 821 (820 Ω)
R23	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R24	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
C1	4010005740	CERAMIC	HM60SJ SL 560J 500V
C3	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C4	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C11	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C13	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C16	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C17	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C18	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C19	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C23	4510006830	ELECTROLYTIC	63 MV 470CZ
C24	4510006830	ELECTROLYTIC	63 MV 470CZ
C25	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C26	4030003410	S.CERAMIC	GRM42-6 B 473K 50PT
C27	4030001170	S.CERAMIC	GRM42-6 B 102K 50PT
C29	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C35	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C37	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C40	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C41	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C42	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C43	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C44	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C45	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C46	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C51	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C52	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C55	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C56	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C57	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
J2	6510017920	CONNECTOR	1811P342
J3	6510019970	S.CONNECTOR	52808-1090
J4	6510019970	S.CONNECTOR	52808-1090
J5	6510003390	CONNECTOR	B03B-EH-S
W6	7030003860	S.JUMPER	ERJ3GE JPW V
WS1	8970022551	M.OTHER	EX1900 J BOARD SET-1 (1)/PA-2
WS2	8970022560	M.OTHER	EX1900 1.5D COAXIAL (1)/PA-2
EP1	6910011330	TERMINAL	OT-009 M3
EP2	6910011330	TERMINAL	OT-009 M3
EP3	6910000640	BEAD	FSOH090RN
EP4	0910048706	PCB	B 4884F

[PA-3 BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
D1	1750000270	S.DIODE	1SS301 (TE85R)
D2	1750000270	S.DIODE	1SS301 (TE85R)
D3	1750000270	S.DIODE	1SS301 (TE85R)
D4	1750000270	S.DIODE	1SS301 (TE85R)

[PA-3 BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
L1	6110001730	COIL	LA-262
L2	6140003040	COIL	LR-322B
L3	6140002590	COIL	LR-296
L4	6140000720	COIL	LR-95
L5	6180000900	COIL	LAL 03NA 101K
L6	6180000900	COIL	LAL 03NA 101K
L7	6140002030	COIL	LR-230
L9	6200003260	S.COIL	NL 322522T-101J
L11	6200003950	S.COIL	HF50ACC 322513-T
R2	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R4	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R5	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R6	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R7	7030006140	S.RESISTOR	ERJ1WYJ560H (56 Ω)
R8	7030006140	S.RESISTOR	ERJ1WYJ560H (56 Ω)
R9	7310003180	TRIMMER	EVN-2ACA00 B24 (203)
R10	7310003180	TRIMMER	EVN-2ACA00 B24 (203)
R11	7070000900	RESISTOR	ERX3SJ 1R8 (1.8 Ω)
R12	7070000900	RESISTOR	ERX3SJ 1R8 (1.8 Ω)
R15	7070000960	RESISTOR	ERG3SJ 561 (560 Ω)
R16	7080001300	RESISTOR	ERG3SJ 270 (27 Ω)
R17	7070000940	RESISTOR	ERG3SJ 331 (330 Ω)
R18	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R19	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R20	7070000930	RESISTOR	ERG3SJ 330 (33 Ω)
R21	7070001000	RESISTOR	ERG3SJ 821 (820 Ω)
R23	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R24	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
C1	4010005740	CERAMIC	HM60SJ SL 560J 500V
C3	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C4	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C11	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C13	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C16	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C17	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C18	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C19	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C23	4510006830	ELECTROLYTIC	63 MV 470CZ
C24	4510006830	ELECTROLYTIC	63 MV 470CZ
C25	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C26	4030003410	S.CERAMIC	GRM42-6 B 473K 50PT
C27	4030001170	S.CERAMIC	GRM42-6 B 102K 50PT
C29	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C35	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C37	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C40	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C41	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C42	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C43	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C44	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C45	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C46	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C51	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C52	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C55	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C56	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C57	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
J2	6510017920	CONNECTOR	1811P342
J3	6510019970	S.CONNECTOR	52808-1090
J4	6510019970	S.CONNECTOR	52808-1090
J5	6510003390	CONNECTOR	B03B-EH-S
W6	7030003860	S.JUMPER	ERJ3GE JPW V
WS1	8970022571	M.OTHER	EX1900 J BOARD SET-1 (1)/PA-3
WS2	8970022580	M.OTHER	EX1900 1.5D COAXIAL (1)/PA-3
EP1	6910011330	TERMINAL	OT-009 M3
EP2	6910011330	TERMINAL	OT-009 M3
EP3	6910000640	BEAD	FSOH090RN
EP4	0910048706	PCB	B 4884F

S.=Surface mount

[PA-4 BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
D1	1750000270	S.DIODE	1SS301 (TE85R)
D2	1750000270	S.DIODE	1SS301 (TE85R)
D3	1750000270	S.DIODE	1SS301 (TE85R)
D4	1750000270	S.DIODE	1SS301 (TE85R)
L1	6110001730	COIL	LA-262
L2	6140003040	COIL	LR-322B
L3	6140002590	COIL	LR-296
L4	6140000720	COIL	LR-95
L5	6180000900	COIL	LAL 03NA 101K
L6	6180000900	COIL	LAL 03NA 101K
L7	6140002030	COIL	LR-230
L9	6200003260	S.COIL	NL 322522T-101J
L11	6200003950	S.COIL	HF50ACC 322513-T
R2	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R4	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R5	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R6	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R7	7030006140	S.RESISTOR	ERJ1WYJ560H (56 Ω)
R8	7030006140	S.RESISTOR	ERJ1WYJ560H (56 Ω)
R9	7310003180	TRIMMER	EVN-2ACA00 B24 (203)
R10	7310003180	TRIMMER	EVN-2ACA00 B24 (203)
R11	7070000900	RESISTOR	ERX3SJ 1R8 (1.8 Ω)
R12	7070000900	RESISTOR	ERX3SJ 1R8 (1.8 Ω)
R15	7070000960	RESISTOR	ERG3SJ 561 (560 Ω)
R16	7080001300	RESISTOR	ERG3SJ 270 (27 Ω)
R17	7070000940	RESISTOR	ERG3SJ 331 (330 Ω)
R18	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R19	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R20	7070000930	RESISTOR	ERG3SJ 330 (33 Ω)
R21	7070001000	RESISTOR	ERG3SJ 821 (820 Ω)
R23	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R24	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
C1	4010005740	CERAMIC	HM60SJ SL 560J 500V
C3	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C4	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C11	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C13	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C16	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C17	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C18	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C19	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C23	4510006830	ELECTROLYTIC	63 MV 470CZ
C24	4510006830	ELECTROLYTIC	63 MV 470CZ
C25	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C26	4030003410	S.CERAMIC	GRM42-6 B 473K 50PT
C27	4030001170	S.CERAMIC	GRM42-6 B 102K 50PT
C29	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C35	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C37	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C40	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C41	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C42	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C43	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C44	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C45	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C46	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C51	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C52	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C55	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C56	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C57	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
J2	6510017920	CONNECTOR	1811P342
J3	6510019970	S.CONNECTOR	52808-1090
J4	6510019970	S.CONNECTOR	52808-1090
J5	6510003390	CONNECTOR	B03B-EH-S
W6	7030003860	S.JUMPER	ERJ3GE JPW V
WS1	8970022591	M.OTHER	EX1900 J BOARD SET-1 (1)/PA-4
WS2	8970022600	M.OTHER	EX1900 1.5D COAXIAL (1)/PA-4

[PA-4 BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
EP1	6910011330	TERMINAL	OT-009 M3
EP2	6910011330	TERMINAL	OT-009 M3
EP3	6910000640	BEAD	FSOH090RN
EP4	0910048706	PCB	B 4884F

[TUNER UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C1	4620000130	VARIABLE	UV55 150PF
C2	4620000130	VARIABLE	UV55 150PF
MF1	2710000460	MOTOR	MP28GA STEPING MOTOR
MF2	2710000460	MOTOR	MP28GA STEPING MOTOR
MF3	2710000630	FAN	FBA08T12HC (with bead core)
WS1	8970022910	M.OTHER	EX1900 COAXIAL (1)/TU
EP7	9019001020	TUBE	D=10, L=65 mm

[DET BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1110001850	IC	MC10116 L
IC2	1110001860	IC	MC10125 L
IC3	1120002250	S.IC	TC74ACT32F
IC4	1120002240	S.IC	TC74AC112F
IC5	1180000320	IC	NJM79L05A
Q1	1560000870	S.FET	2SK515-T1B (X33)
D3	1790000620	S.DIODE	MA77 (TX)
D4	1790000620	S.DIODE	MA77 (TX)
D5	1790000620	S.DIODE	MA77 (TX)
D6	1790000620	S.DIODE	MA77 (TX)
D7	1750000270	S.DIODE	1SS301 (TE85R)
D8	1750000270	S.DIODE	1SS301 (TE85R)
D11	1710000980	DIODE	MBD701
D12	1710000980	DIODE	MBD701
D13	1790001530	DIODE	1SS286
D14	1790001530	DIODE	1SS286
L1	6180000960	COIL	LAL 03NA 102K
L3	6140002660	COIL	LR-299
L4	6180000960	COIL	LAL 03NA 102K
L5	6140002660	COIL	LR-299
L8	6180000990	COIL	LAL 04NA 101K
L9	6200003260	S.COIL	NL 322522T-101J
L10	6200003260	S.COIL	NL 322522T-101J
L11	6140002220	COIL	LR-270
L12	6180000990	COIL	LAL 04NA 101K
R1	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R2	7030000080	S.RESISTOR	MCR10EZHJ 3.3 Ω (3R3)
R3	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R4	7030008320	S.RESISTOR	ERJ1WYJ6R8H (6.8 Ω)
R5	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R6	7030000080	S.RESISTOR	MCR10EZHJ 3.3 Ω (3R3)
R7	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R8	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R9	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R11	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R12	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R13	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)

S.=Surface mount

[DET BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
R14	7030009330	RESISTOR	ERJ1WYJ300H
R15	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R16	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R17	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R18	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R19	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R20	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R21	7030009330	RESISTOR	ERJ1WYJ300H
C1	4010005570	CERAMIC	HM60SJ SL 060D 500V
C2	4010005370	CERAMIC	HM11SJ SL 331J 500V
C3	4010005370	CERAMIC	HM11SJ SL 331J 500V
C4	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C5	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C6	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C7	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C8	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C9	4010005740	CERAMIC	HM60SJ SL 560J 500V
C10	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C11	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C12	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C13	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C14	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C15	4010005540	CERAMIC	HM60SJ SL 030C 500V
C16	4010005880	CERAMIC	HM95SJ SL 271J 500V
C17	4010005850	CERAMIC	HM95SJ SL 181J 500V
C18	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C19	4010005780	CERAMIC	HM60SJ SL 101J 500V
C20	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C21	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C22	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C23	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C24	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C25	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C26	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C27	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C29	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C30	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C33	4010005110	CERAMIC	DE0910 SL 220J 6KV
C34	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C35	4010005850	CERAMIC	HM95SJ SL 181J 500V
C36	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C37	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C38	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C39	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C40	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C41	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C42	4010005110	CERAMIC	DE0910 SL 220J 6KV
C43	4010005050	CERAMIC	DE0707 SL 270J 3KV
C44	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C45	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
WS1	8970022630	M.OTHER	EX1900 TEFLON COAXIAL (2)/DE
WS2	8600035821	M.OTHER	EX1900 P01*J01DE-1
EP5	6910011330	TERMINAL	OT-009 M3
EP6	6910011330	TERMINAL	OT-009 M3
EP7	6910011330	TERMINAL	OT-009 M3
EP8	6910011330	TERMINAL	OT-009 M3
EP9	0910048738	PCB	B 4887H
EP10	9029703901	TUBE	IRRAX 0.7 (d) L=5 mm

[CONNECT BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
C1	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
C2	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
C3	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
C4	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
C5	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
C6	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
C7	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
C8	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
J1	6510017650	CONNECTOR	52045-1045
J2	6510003410	CONNECTOR	B05B-EH-S
J3	6510003410	CONNECTOR	B05B-EH-S
EP1	0910048814	PCB	B 4941D

[L-NET BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
D1	1710000050	DIODE	1SS53
D2	1710000050	DIODE	1SS53
L1	6180000990	COIL	LAL 04NA 101K
L2	6180000990	COIL	LAL 04NA 101K
L3	6110003360	COIL	LA-530
L4	6110003500	COIL	LA-543
L5	6110003490	COIL	LA-542
C1	4040000150	BARRIER	UAT 05X 472K
C2	4040000150	BARRIER	UAT 05X 472K
C3	4040000260	BARRIER	UZE 08X 104M
C4	4040000260	BARRIER	UZE 08X 104M
RL1	6330000570	RELAY	AR-39251
RL2	6330000570	RELAY	AR-39251
WS1	8600035830	M.OTHER	EX1900 P01*J01L
EP1	6910011340	TERMINAL	OT-010 M3
EP2	0910048727	PCB	B 4886G

[H-NET BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
D1	1710000050	DIODE	1SS53
D2	1710000050	DIODE	1SS53
D3	1710000050	DIODE	1SS53
D4	1710000050	DIODE	1SS53
D5	1710000050	DIODE	1SS53
D6	1710000050	DIODE	1SS53
D7	1710000050	DIODE	1SS53
D8	1710000050	DIODE	1SS53
D9	1710000050	DIODE	1SS53
D10	1710000050	DIODE	1SS53
L1	6180000990	COIL	LAL 04NA 101K
L2	6180000990	COIL	LAL 04NA 101K
L3	6180000990	COIL	LAL 04NA 101K
L4	6180000990	COIL	LAL 04NA 101K
L5	6180000990	COIL	LAL 04NA 101K
L6	6180000990	COIL	LAL 04NA 101K
L7	6180000990	COIL	LAL 04NA 101K
L8	6180000990	COIL	LAL 04NA 101K

S.=Surface mount

[H-NET BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
L9	6180000990	COIL	LAL 04NA 101K
L10	6180000990	COIL	LAL 04NA 101K
L11	6110003410	COIL	LA-535
L12	6110003400	COIL	LA-534
L13	6110003510	COIL	LA-544
L14	6110003380	COIL	LA-532
L15	6110003370	COIL	LA-531
C1	4040000260	BARRIER	UZE 08X 104M
C2	4040000260	BARRIER	UZE 08X 104M
C3	4040000260	BARRIER	UZE 08X 104M
C4	4040000260	BARRIER	UZE 08X 104M
C5	4040000260	BARRIER	UZE 08X 104M
C6	4040000260	BARRIER	UZE 08X 104M
C7	4040000260	BARRIER	UZE 08X 104M
C8	4040000260	BARRIER	UZE 08X 104M
C9	4040000260	BARRIER	UZE 08X 104M
C10	4040000260	BARRIER	UZE 08X 104M
C11	4040000150	BARRIER	UAT 05X 472K
C12	4040000150	BARRIER	UAT 05X 472K
C13	4040000150	BARRIER	UAT 05X 472K
C14	4040000150	BARRIER	UAT 05X 472K
C15	4040000150	BARRIER	UAT 05X 472K
C16	4040000150	BARRIER	UAT 05X 472K
C17	4040000150	BARRIER	UAT 05X 472K
C18	4040000150	BARRIER	UAT 05X 472K
C19	4040000150	BARRIER	UAT 05X 472K
C20	4040000150	BARRIER	UAT 05X 472K
RL1	6330000570	RELAY	AR-39251
RL2	6330000570	RELAY	AR-39251
RL3	6330000570	RELAY	AR-39251
RL4	6330000570	RELAY	AR-39251
RL5	6330000570	RELAY	AR-39251
RL6	6330000570	RELAY	AR-39251
RL7	6330000570	RELAY	AR-39251
RL8	6330000570	RELAY	AR-39251
RL9	6330000570	RELAY	AR-39251
RL10	6330000570	RELAY	AR-39251
WS1	8600035841	M.OTHER	EX1900 P01*J01H-1
EP2	6910011340	TERMINAL	OT-010 M3
EP3	0910049304	PCB	B 5017D

[C-NET BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
D1	1710000050	DIODE	1SS53
D2	1710000050	DIODE	1SS53
D14	1710000050	DIODE	1SS53
D15	1710000050	DIODE	1SS53
D16	1710000050	DIODE	1SS53
D17	1710000050	DIODE	1SS53
D18	1710000050	DIODE	1SS53
D19	1710000050	DIODE	1SS53
D20	1710000050	DIODE	1SS53
D21	1710000050	DIODE	1SS53
L1	6180000990	COIL	LAL 04NA 101K
L2	6180000990	COIL	LAL 04NA 101K
L14	6180000990	COIL	LAL 04NA 101K
L15	6180000990	COIL	LAL 04NA 101K
L16	6180000990	COIL	LAL 04NA 101K
L17	6180000990	COIL	LAL 04NA 101K
L18	6180000990	COIL	LAL 04NA 101K
L19	6180000990	COIL	LAL 04NA 101K
L20	6180000990	COIL	LAL 04NA 101K
L21	6180000990	COIL	LAL 04NA 101K

[C-NET BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
C1	4040000150	BARRIER	UAT 05X 472K
C2	4040000150	BARRIER	UAT 05X 472K
C34	4040000150	BARRIER	UAT 05X 472K
C39	4040000150	BARRIER	UAT 05X 472K
C40	4010004790	CERAMIC	DE1210 SL 680J 6KV
C41	4010004790	CERAMIC	DE1210 SL 680J 6KV
C42	4010004790	CERAMIC	DE1210 SL 680J 6KV
C43	4010004790	CERAMIC	DE1210 SL 680J 6KV
C44	4040000150	BARRIER	UAT 05X 472K
C45	4010004300	CERAMIC	DE1410 SL 221J 3KV
C46	4010004300	CERAMIC	DE1410 SL 221J 3KV
C47	4010004300	CERAMIC	DE1410 SL 221J 3KV
C48	4010004300	CERAMIC	DE1410 SL 221J 3KV
C49	4040000150	BARRIER	UAT 05X 472K
C50	4010004810	CERAMIC	DE1310 SL 101J 6KV
C51	4010004810	CERAMIC	DE1310 SL 101J 6KV
C52	4010004810	CERAMIC	DE1310 SL 101J 6KV
C53	4010004810	CERAMIC	DE1310 SL 101J 6KV
C54	4040000150	BARRIER	UAT 05X 472K
C55	4010004710	CERAMIC	DE0707 SL 150J 3KV
C56	4010004710	CERAMIC	DE0707 SL 150J 3KV
C57	4010004710	CERAMIC	DE0707 SL 150J 3KV
C58	4010004710	CERAMIC	DE0707 SL 150J 3KV
C59	4040000150	BARRIER	UAT 05X 472K
C60	4010004800	CERAMIC	DE1210 SL 820J 6KV
C61	4010004800	CERAMIC	DE1210 SL 820J 6KV
C62	4010004800	CERAMIC	DE1210 SL 820J 6KV
C63	4010004800	CERAMIC	DE1210 SL 820J 6KV
C64	4040000150	BARRIER	UAT 05X 472K
C65	4010004810	CERAMIC	DE1310 SL 101J 6KV
C66	4010004810	CERAMIC	DE1310 SL 101J 6KV
C67	4010004810	CERAMIC	DE1310 SL 101J 6KV
C68	4010004810	CERAMIC	DE1310 SL 101J 6KV
C69	4040000150	BARRIER	UAT 05X 472K
C70	4010004830	CERAMIC	DE1510 SL 151J 6KV
C71	4010004830	CERAMIC	DE1510 SL 151J 6KV
C72	4010004830	CERAMIC	DE1510 SL 151J 6KV
C73	4010004830	CERAMIC	DE1510 SL 151J 6KV
C74	4010004710	CERAMIC	DE0707 SL 150J 3KV
C75	4010004710	CERAMIC	DE0707 SL 150J 3KV
C76	4010004710	CERAMIC	DE0707 SL 150J 3KV
C77	4010004710	CERAMIC	DE0707 SL 150J 3KV
C82	4010004810	CERAMIC	DE1310 SL 101J 6KV
C84	4010004810	CERAMIC	DE1310 SL 101J 6KV
C86	4010004810	CERAMIC	DE1310 SL 101J 6KV
C87	4010004810	CERAMIC	DE1310 SL 101J 6KV
C88	4010004810	CERAMIC	DE1310 SL 101J 6KV
C89	4010004810	CERAMIC	DE1310 SL 101J 6KV
C90	4010004710	CERAMIC	DE0707 SL 150J 3KV
C91	4010004710	CERAMIC	DE0707 SL 150J 3KV
C92	4010004710	CERAMIC	DE0707 SL 150J 3KV
C93	4010004710	CERAMIC	DE0707 SL 150J 3KV
C94	4010004710	CERAMIC	DE0707 SL 150J 3KV
C95	4010004710	CERAMIC	DE0707 SL 150J 3KV
C96	4010004710	CERAMIC	DE0707 SL 150J 3KV
C97	4010004710	CERAMIC	DE0707 SL 150J 3KV
RL1	6330001440	RELAY	VS-12TBU-VD3
RL2	6330001440	RELAY	VS-12TBU-VD3
RL3	6330000570	RELAY	AR-39251
RL4	6330001490	RELAY	VB-12MBU-UC (UL3)
RL5	6330001490	RELAY	VB-12MBU-UC (UL3)
RL6	6330001490	RELAY	VB-12MBU-UC (UL3)
RL7	6330000570	RELAY	AR-39251
RL8	6330001490	RELAY	VB-12MBU-UC (UL3)
RL9	6330001490	RELAY	VB-12MBU-UC (UL3)
RL10	6330001490	RELAY	VB-12MBU-UC (UL3)
WS1	8600035851	M.OTHER	EX1900 P01*J01C-1
WS2	8600035861	M.OTHER	EX1900 P02*J02C-1
EP3	0910049245	PCB	B 5019E

S.=Surface mount

[JACK1 UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
L1	6200003260	S.COIL	NL 322522T-101J
L2	6200003260	S.COIL	NL 322522T-101J
L3	6200003260	S.COIL	NL 322522T-101J
L4	6200003260	S.COIL	NL 322522T-101J
L5	6200003260	S.COIL	NL 322522T-101J
L6	6200003260	S.COIL	NL 322522T-101J
R1	7310003820	TRIMMER	EVN-D2AA03 B14
R2	7310003820	TRIMMER	EVN-D2AA03 B14
C1	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C2	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C3	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C4	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C5	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C6	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
J1	6450001590	CONNECTOR	TCS5073-17-4151
J3	6450001130	CONNECTOR	JPJ2042-01-110
J4	6450000140	CONNECTOR	HSJ0807-01-010
J5	6450001590	CONNECTOR	TCS5073-17-4151
J7	6450001130	CONNECTOR	JPJ2042-01-110
J8	6450000140	CONNECTOR	HSJ0807-01-010
J9	6510019140	S.CONNECTOR	52610-1090
J10	6510003450	CONNECTOR	B09B-EH-S
J11	6510003450	CONNECTOR	B09B-EH-S
J12	6510018960	S.CONNECTOR	B2B-PH-SM3-TB
S1	2220000570	SWITCH	HSW1196-01-020
EP1	0910048776	PCB	B 4898F

[ANT-SW UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
D1	1710000050	DIODE	1SS53
D2	1710000050	DIODE	1SS53
D3	1710000050	DIODE	1SS53
D4	1710000050	DIODE	1SS53
L1	6180000900	COIL	LAL 03NA 101K
L2	6180000900	COIL	LAL 03NA 101K
L3	6180000900	COIL	LAL 03NA 101K
L4	6180000900	COIL	LAL 03NA 101K
R1	7540000190	ABSOBER	SRYG-2000L
C1	4010006900	CERAMIC	HE80SJ YB 472K 50V
C2	4010006900	CERAMIC	HE80SJ YB 472K 50V
C3	4010006900	CERAMIC	HE80SJ YB 472K 50V
C4	4010006900	CERAMIC	HE80SJ YB 472K 50V
C6	4010006900	CERAMIC	HE80SJ YB 472K 50V
C7	4010006900	CERAMIC	HE80SJ YB 472K 50V
C8	4010006900	CERAMIC	HE80SJ YB 472K 50V
C9	4010006900	CERAMIC	HE80SJ YB 472K 50V
C11	4010004310	CERAMIC	DE0705 SL 100D 1KV
C12	4010004310	CERAMIC	DE0705 SL 100D 1KV
C13	4010004310	CERAMIC	DE0705 SL 100D 1KV
C14	4010004310	CERAMIC	DE0705 SL 100D 1KV
C15	4010004310	CERAMIC	DE0705 SL 100D 1KV
C16	4010004310	CERAMIC	DE0705 SL 100D 1KV
RL1	6330001460	RELAY	FTR-F1CA012V
RL2	6330001460	RELAY	FTR-F1CA012V
RL3	6330001460	RELAY	FTR-F1CA012V
RL4	6330001460	RELAY	FTR-F1CA012V

[ANT-SW UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
WS1	8600035743	M.OTHER	EX1900 P01*J01AN-SW-3
EP1	6910011340	TERMINAL	OT-010 M3
EP2	6910011340	TERMINAL	OT-010 M3
EP3	0910048716	PCB	B 4885F

[FRONT UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
DS1	5080000380	LAMP	HRS-4160A-H9 L150
DS2	5080000380	LAMP	HRS-4160A-H9 L150
ME1	5510000470	METER	ME-39
ME2	5510000460	METER	ME-38
WS1	8970022810	M.OTHER	EX1900 J LEAD SET (4)/FR
WS2	8600035961	M.OTHER	EX1900 P03*04FR-1
EP1	6910011040	TUBE	A-4210-G20
EP2	6910011040	TUBE	A-4210-G20

[SW BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1130000830	S.IC	µPD4094BG-T1
IC2	1130000830	S.IC	µPD4094BG-T1
IC3	1130000830	S.IC	µPD4094BG-T1
IC4	1130000830	S.IC	µPD4094BG-T1
IC5	1110003690	S.IC	M62354GP 75EC
IC6	1180001070	S.IC	TA7805F (TE16L)
IC7	1130004670	S.IC	BU4021BF-T1
IC8	1130007260	S.IC	TC7W74FU (TE12L)
IC9	1130005820	S.IC	TC4S584F (TE85R)
Q1	1590002310	S.TRANSISTOR	DTC114EE TL
Q2	1590002310	S.TRANSISTOR	DTC114EE TL
Q3	1590002310	S.TRANSISTOR	DTC114EE TL
Q4	1590002310	S.TRANSISTOR	DTC114EE TL
Q5	1590002310	S.TRANSISTOR	DTC114EE TL
Q6	1590002310	S.TRANSISTOR	DTC114EE TL
Q7	1590002310	S.TRANSISTOR	DTC114EE TL
Q8	1590002310	S.TRANSISTOR	DTC114EE TL
Q9	1590002310	S.TRANSISTOR	DTC114EE TL
Q10	1590002310	S.TRANSISTOR	DTC114EE TL
Q11	1590002310	S.TRANSISTOR	DTC114EE TL
Q12	1590002310	S.TRANSISTOR	DTC114EE TL
Q13	1590002310	S.TRANSISTOR	DTC114EE TL
Q14	1590002310	S.TRANSISTOR	DTC114EE TL
Q15	1590002310	S.TRANSISTOR	DTC114EE TL
Q16	1590002310	S.TRANSISTOR	DTC114EE TL
Q17	1590002310	S.TRANSISTOR	DTC114EE TL
Q18	1590002310	S.TRANSISTOR	DTC114EE TL
Q19	1590002310	S.TRANSISTOR	DTC114EE TL
Q20	1590002310	S.TRANSISTOR	DTC114EE TL
Q21	1590002310	S.TRANSISTOR	DTC114EE TL
Q22	1590002310	S.TRANSISTOR	DTC114EE TL
Q23	1590002310	S.TRANSISTOR	DTC114EE TL
Q24	1590002310	S.TRANSISTOR	DTC114EE TL
Q25	1590002310	S.TRANSISTOR	DTC114EE TL
Q26	1590002310	S.TRANSISTOR	DTC114EE TL
Q27	1590002310	S.TRANSISTOR	DTC114EE TL
Q31	1590001940	S.TRANSISTOR	DTC144EE TL
Q32	1520000460	S.TRANSISTOR	2SB1132 T100 R

S.=Surface mount

[SW BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
D1	1750000270	S.DIODE	1SS301 (TE85R)
D2	1750000270	S.DIODE	1SS301 (TE85R)
D3	1750000290	S.DIODE	1SS300 (TE85R)
D4	1750000290	S.DIODE	1SS300 (TE85R)
D5	1730002320	S.ZENER	MA8051-M (TX)
D6	1750000270	S.DIODE	1SS301 (TE85R)
D7	1750000290	S.DIODE	1SS300 (TE85R)
D8	1750000270	S.DIODE	1SS301 (TE85R)
D10	1750000230	S.DIODE	1SS315 TPH-3
D11	1750000230	S.DIODE	1SS315 TPH-3
L1	6200003260	S.COIL	NL 322522T-101J
L2	6200003260	S.COIL	NL 322522T-101J
L3	6200003260	S.COIL	NL 322522T-101J
L4	6200003260	S.COIL	NL 322522T-101J
L5	6200003950	S.COIL	HF50ACC 322513-T
L6	6200003950	S.COIL	HF50ACC 322513-T
L7	6200003260	S.COIL	NL 322522T-101J
L8	6200003260	S.COIL	NL 322522T-101J
R1	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R2	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R3	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R4	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R5	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R6	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R7	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R8	7030003330	S.RESISTOR	ERJ3GEYJ 121 V (120 Ω)
R9	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R10	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R11	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R12	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R13	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R14	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R15	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R16	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R17	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R18	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R19	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R20	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R21	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R22	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R23	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R24	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R25	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R26	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R27	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R29	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R30	7030008190	S.RESISTOR	ERJ12YJ330H (33 Ω)
R31	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R32	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R33	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R34	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R35	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R36	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R37	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R38	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R39	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R40	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R41	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R42	7030006060	S.RESISTOR	ERJ12YJ100H (10 Ω)
R43	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R44	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R45	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R46	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R47	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R48	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R51	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R52	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R53	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R54	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R55	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R56	7310002740	S.TRIMMER	RV-150 (RH03A3A14X0FC) 103
R57	7310002740	S.TRIMMER	RV-150 (RH03A3A14X0FC) 103
R58	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R59	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R60	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R61	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R62	7030009170	S.RESISTOR	ERJ1WYJ1R5H (1.5 Ω)
R63	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)

[SW BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
C1	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C2	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C3	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C4	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C5	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C6	4510005860	S.ELECTROLYTIC	ECEV1HA2R2SR
C7	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C8	4510004870	S.ELECTROLYTIC	ECEV1CA330P
C9	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C10	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C11	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C16	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C17	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C18	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C19	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C20	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C21	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C24	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C25	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C26	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C27	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C28	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C29	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C30	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C31	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C32	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C33	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C34	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
J1	6510003450	CONNECTOR	B09B-EH-S
DS1	5040002080	S.LED	CL-200YG-C-TU
DS2	5040002080	S.LED	CL-200YG-C-TU
DS3	5040002080	S.LED	CL-200YG-C-TU
DS4	5040002080	S.LED	CL-200YG-C-TU
DS5	5040002080	S.LED	CL-200YG-C-TU
DS6	5040002080	S.LED	CL-200YG-C-TU
DS7	5040002080	S.LED	CL-200YG-C-TU
DS8	5040001870	S.LED	SEC 2462C
DS9	5040002010	S.LED	CL-170PG-CD-T
DS10	5040002010	S.LED	CL-170PG-CD-T
DS11	5040002010	S.LED	CL-170PG-CD-T
DS12	5040002010	S.LED	CL-170PG-CD-T
DS13	5040002010	S.LED	CL-170PG-CD-T
DS14	5040002010	S.LED	CL-170PG-CD-T
DS15	5040002010	S.LED	CL-170PG-CD-T
DS16	5040002010	S.LED	CL-170PG-CD-T
DS17	5040002010	S.LED	CL-170PG-CD-T
DS18	5040002080	S.LED	CL-200YG-C-TU
DS19	5040002080	S.LED	CL-200YG-C-TU
DS20	5040002010	S.LED	CL-170PG-CD-T
DS21	5040002010	S.LED	CL-170PG-CD-T
DS22	5040002080	S.LED	CL-200YG-C-TU
DS23	5040002080	S.LED	CL-200YG-C-TU
DS24	5040002080	S.LED	CL-200YG-C-TU
DS26	5040002080	S.LED	CL-200YG-C-TU
DS27	5040002080	S.LED	CL-200YG-C-TU
S1	2260001890	S.SWITCH	SKQDPA
S2	2260001890	S.SWITCH	SKQDPA
S3	2260001890	S.SWITCH	SKQDPA
S4	2260001890	S.SWITCH	SKQDPA
S5	2260001890	S.SWITCH	SKQDPA
S6	2260001890	S.SWITCH	SKQDPA
S7	2260001890	S.SWITCH	SKQDPA
S8	2260001890	S.SWITCH	SKQDPA
S9	2260001890	S.SWITCH	SKQDPA
W1	7030003860	S.JUMPER	ERJ3GE JPW V
W3	7030003860	S.JUMPER	ERJ3GE JPW V
W4	7030003860	S.JUMPER	ERJ3GE JPW V
W5	7030003860	S.JUMPER	ERJ3GE JPW V
W6	7030003860	S.JUMPER	ERJ3GE JPW V
W8	7120000380	JUMPER	JPW 01 R-01
EP1	0910048766	PCB	B 4893F

S.=Surface mount

SECTION 6 MECHANICAL PARTS AND DISASSEMBLY

6-1 FRAME DISASSEMBLY

[CHASSIS PARTS]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510000410	Connector MR-DS-E 02	1
J2	6510000410	Connector MR-DS-E 02	1
J3	6510009290	Connector MR-DSE-02(AG)	1
J4	6510009290	Connector MR-DSE-02(AG)	1
J5	6510009290	Connector MR-DSE-02(AG)	1
J6	6510009290	Connector MR-DSE-02(AG)	1
W5	8900005410	Cable OPC-521	1
W16	8900005410	Cable OPC-521	1
W17	8900005410	Cable OPC-521	1
W18	8900005410	Cable OPC-521	1
W20	8900005380	Cable OPC-525 (N:10 L:400)	1
W21	8900007260	Cable OPC-712 (N:10 L:500)	1
W31	8900008030	Cable OPC-769 [USA], [EUR]	2
W32	8900008210	Cable OPC-805	1
EP8	0880000320	PX-1981 USA Attachment unit [USA]	1
	0880000330	PX-1981 EUR Attachment unit [EUR]	1
	0880000570	PX-1981 EUR-1 Attachment unit[EUR-1]	1
EP9	6910000310	B312D Isolating bush [USA], [EUR]	2
EP11	6910000310	B312D Isolating bush	2
EP13	6910010480	DL-7C OR-31-15-19H	5
MP1	8210014270	1900 Front panel	1
MP2	8110006231	1900 A-cover-1	1
MP3	8010017072	1900 A-sub chassis-2	1
MP4	8210014952	1900 A-rear panel-2	1
MP5	8010017080	1900 A-cent chassis	1
MP6	8110006243	1900 A-bottom cover-3	1
MP7	8010017091	1900 A-side chassis-1	1
MP8	8930042540	1900 Jack plate	2
MP10	8510011342	1900 A-filter case-2	1
MP11	8510011360	1900 A-filter cover	1
MP12	8310039540	1900 hole plate	1
MP16	8810009620	Bind screw BT M3 × 6 ZK	1
MP17	8810009620	Bind screw BT M3 × 6 ZK	3
MP21	8810003160	Set screw A M3 × 6	4
MP23	8810003160	Set screw A M3 × 6	4
MP26	8810003160	Set screw A M3 × 6	11
MP30	8810004430	Screw PH M3 × 6 ZK	8
MP31	8810004430	Screw PH M3 × 6 ZK	4
MP32	8810009620	Bind screw BT M3 × 6 ZK	1
MP33	8810009620	Bind screw BT M3 × 6 ZK	1
MP34	8810009620	Bind screw BT M3 × 6 ZK	1
MP35	8810009620	Bind screw BT M3 × 6 ZK	1
MP36	8810009620	Bind screw BT M3 × 6 ZK	4
MP37	8810009620	Bind screw BT M3 × 6 ZK	2
MP38	8810009620	Bind screw BT M3 × 6 ZK	1
MP39	8810009620	Bind screw BT M3 × 6 ZK	1
MP40	8810009620	Bind screw BT M3 × 6 ZK	1
MP41	8810009620	Bind screw BT M3 × 6 ZK	2
MP42	8810009620	Bind screw BT M3 × 6 ZK	7
MP45	8810009620	Bind screw BT M3 × 6 ZK	5
MP46	8810008660	Bind screw BT M3 × 8 ZK	4
MP48	8810004430	Screw PH M3 × 6 ZK	2
MP49	8810008690	Screw PH BT M4 ×16 NI-ZU	5
MP52	8810009620	Bind screw BT M3 × 6 ZK	4
MP53	8810009620	Bind screw BT M3 × 6 ZK	6
MP54	8810009620	Bind screw BT M3 × 6 ZK	2

[CHASSIS PARTS]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
MP55	8810009620	Bind screw BT M3 × 6 ZK	2
MP56	8810009350	Screw PH B0 M3 × 8 SUS ZK	2
MP57	8810009620	Bind screw BT M3 × 6 ZK	3
MP59	8810009620	Bind screw BT M3 × 6 ZK	2
MP61	8810004300	Screw PH M3 ×10 ZK	2
MP63	8810009620	Bind screw BT M3 × 6 ZK	4
MP64	8810004430	Screw PH M3 × 6 ZK	4
MP65	8810008450	Bind screw M4 × 8 ZK	4
MP66	8810008450	Bind screw M4 × 8 ZK	2
MP67	8810008450	Bind screw M4 × 8 ZK	2
MP68	8830000360	Wing nut M5 NI	1
MP69	8850000150	Flat washer M5 NI BS	3
MP70	8830000210	Nut M5 NI BS	1
MP71	8850000440	Spring washer M 5 NI	1
MP72	8930011680	Rubber standoff (G)	5
MP73	8930037420	Rubber sheet (P)	2
MP74	8810009620	Bind screw BT M3 × 6 ZK	1
MP75	8810009620	Bind screw BT M3 × 6 ZK	2
MP76	8810003360	Set screw C M3 × 6	1
MP77	8810003360	Set screw C M3 × 6	1
MP78	8810003360	Set screw C M3 × 6	1
MP79	8810003360	Set screw C M3 × 6	1
MP80	8810003360	Set screw C M3 × 6	1
MP81	8810003360	Set screw C M3 × 6	1
MP82	8810003360	Set screw C M3 × 6	1
MP83	8810003360	Set screw C M3 × 6	1
MP84	8810003360	Set screw C M3 × 6	1
MP85	8810003360	Set screw C M3 × 6	1
MP86	8310044320	IC-PW1 FCC sirial number seal [USA]	1
	8310039900	IC-PW1 FCC sirial number seal EUR]	1
	8310046130	IC-PW1 FCC sirial number seal [EUR-1]	1
MP87	8810009620	Bind screw BT M3 × 6 ZK	3
MP88	8810009620	Bind screw BT M3 × 6 ZK	1
MP90	8930046310	1900 A-sheet	1
MP95	8930037280	Poli-cap type M	4
MP96	8930038820	Alumi-sheet V	1
MP97	8930047150	1900 A-side sheet	1
MP98	8930047160	1900 B-side sheet	1
MP99	8930047170	Isolating plate FH	2
MP100	8930047140	Isplating plate FI	1
MP104	8810008660	Screw PH BT M3 × 8 NI-ZU	1
MP105	8810008660	Screw PH BT M3 × 8 NI-ZU	1
MP106	6910008240	59TN4772	1
MP109	8930001170	Grounding spring (A)	1
MP110	8510011840	1900 A-shield plate	1
MP111	8930047270	Sponge (FH)	3
MP112	8930047280	Sponge	1
MP113	8930047260	Himeron sheet (BV)	1
MP114	8930047440	Isolating plate	2
MP116	6910008240	59TN4771	1
MP117	8930046320	1900 B-Sheet	1
MP119	8810009310	Screw FH BT M3 × 6 NI-ZU	1
MP120	8810009620	Bind screw BT M3 × 6 ZK	1
MP121	8810009620	Bind screw BT M3 × 6 ZK	2
WS1	8970022801	EX1900 Special coaxial cable-1 (2)/CH	1
WS3	8970022520	EX1900 1.5D coaxial cable (2)/CH	1

Screw abbreviations: PH: Pan head BT: Self-tapping ZK: Black

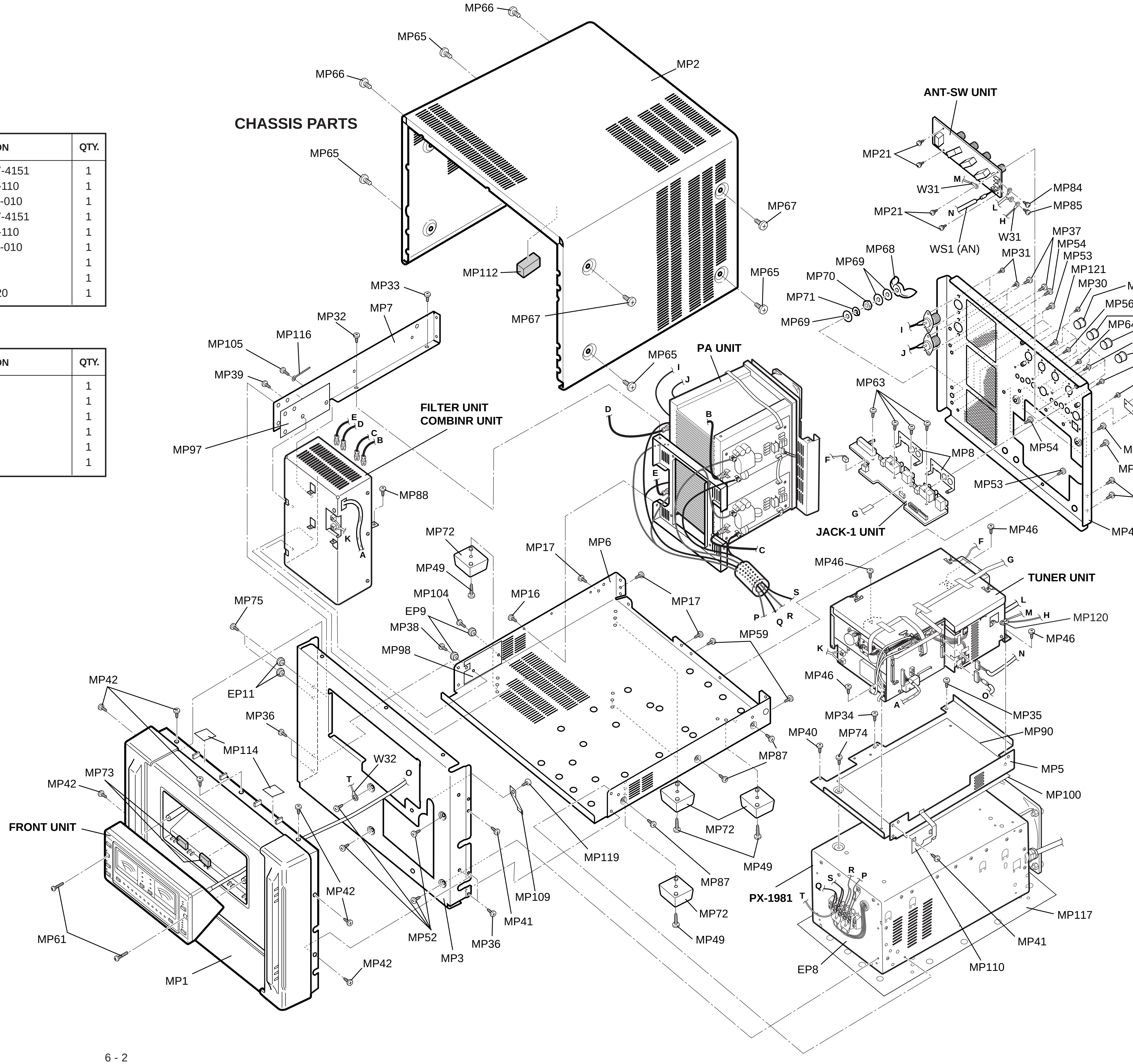
[JACK-1 UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6450001590	Connector TCS5073-17-4151	1
J3	6450001130	Connector JPJ2042-01-110	1
J4	6450000140	Connector HSJ0807-01-010	1
J5	6450001590	Connector TCS5073-17-4151	1
J7	6450001130	Connector JPJ2042-01-110	1
J8	6450000140	Connector HSJ0807-01-010	1
J10	6510003450	Connector B09B-EH-S	1
J11	6510003450	Connector B09B-EH-S	1
S1	2220000570	Switch HSW1196-01-020	1

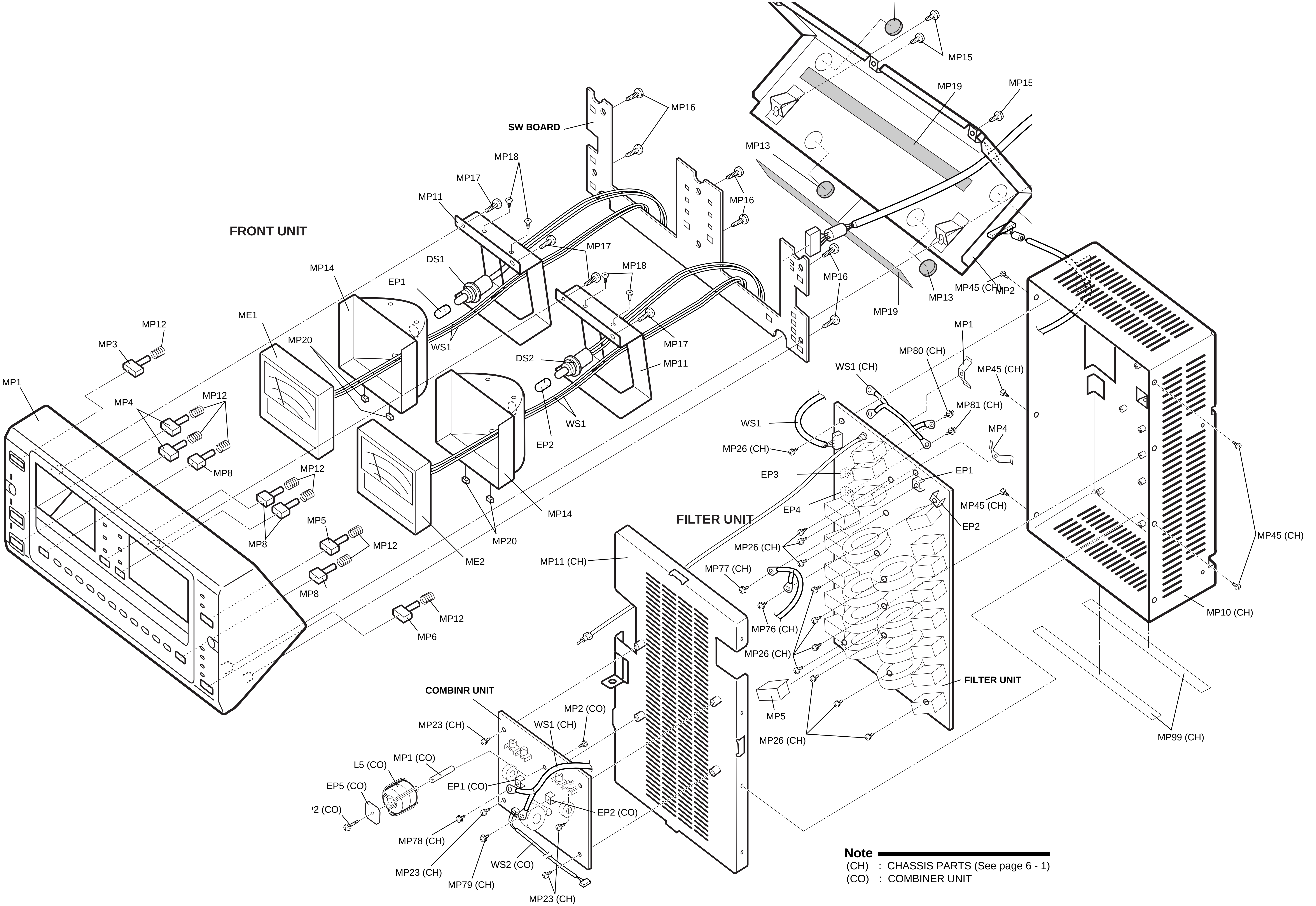
[ANT-SW UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
EP1	6910011340	Terminal OT-010 M3	1
EP2	6910011340	Terminal OT-010 M3	1
RL1	6330001460	Relay FTR-F1CA012V	1
RL2	6330001460	Relay FTR-F1CA012V	1
RL3	6330001460	Relay FTR-F1CA012V	1
RL4	6330001460	Relay FTR-F1CA012V	1

CHASSIS PARTS



Note
(AN) : ANT-SW UNIT



Note

(CH) : CHASSIS PARTS (See page 6 - 1)
(CO) : COMBINER UNIT

6-2 FRONT UNIT DISASSEMBLY

[FRONT UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
DS1	5080000380	Lamp HRS-4160A-H9 L150	1
DS2	5080000380	Lamp HRS-4160A-H9 L150	1
EP1	6910011040	Tube A-4210-G20	1
EP2	6910011040	Tube A-4210-G20	1
ME1	5510000470	Meter ME-39 EX1900	1
ME2	5510000460	Meter ME-38	1
MP1	8210014260	1900 Control panel	1
MP2	8110006101	1900 Control cover-1	1
MP3	8610008431	Knob K202-1	1
MP4	8610010371	Knob K155(A)-1 EX1900	2
MP5	8610010381	Knob K155(B)-1 EX1900	1
MP6	8610010391	Knob K155(C)-1 EX1900	1
MP8	8610010411	Knob K200(B)-1 EX1900	4
MP11	8930042550	1900 Meter angle	2
MP12	8930017960	Push spring	9
MP13	8930041660	Standoff cushion (B)	4
MP14	8010002990	Meter holder	2
MP15	8810004430	Screw PH M3 × 6 ZK	5
MP16	8810008660	SCREW PH BT M3 × 8 NI-ZU	6
MP17	8810008660	SCREW PH BT M3 × 8 NI-ZU	4
MP18	8810002250	SCREW FH B0 M2.6 × 6	4
MP19	8930006630	Himeron sheet G	2
MP20	8930043290	Rubber sheet (AF)	4
WS1	8970022810	EX1900 J lead set (4)/FR	4
WS2	8600035961	EX1900 P03*04FR-1	1

6-3 FILTER UNIT DISASSEMBLY

[FILTER UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
EP1	6910011330	Terminal OT-009 M3	1
EP2	6910011330	Terminal OT-009 M3	1
EP3	6910011330	Terminal OT-009 M3	1
EP4	6910011330	Terminal OT-009 M3	1
MP1	8930014140	Grounding spring(D)	1
MP4	8930014140	Grounding spring(D)	1
MP5	8510011480	1900 AL cover	1
RL1	6330000201	Relay VS-12TBU-E-UC	1
RL2	6330000201	Relay VS-12TBU-E-UC	1
RL3	6330000201	Relay VS-12TBU-E-UC	1
RL4	6330000201	Relay VS-12TBU-E-UC	1
RL5	6330000201	Relay VS-12TBU-E-UC	1
RL6	6330000201	Relay VS-12TBU-E-UC	1
RL7	6330000201	Relay VS-12TBU-E-UC	1
RL8	6330000201	Relay VS-12TBU-E-UC	1
RL9	6330000201	Relay VS-12TBU-E-UC	1
RL10	6330000201	Relay VS-12TBU-E-UC	1
RL11	6330000201	Relay VS-12TBU-E-UC	1
RL12	6330000201	Relay VS-12TBU-E-UC	1
RL13	6330000201	Relay VS-12TBU-E-UC	1
RL14	6330000201	Relay VS-12TBU-E-UC	1
RL15	6330001500	Relay AW3033	1
RL16	6330001210	Relay VB-12TBU-UC (UL3)	1
RL17	6330001210	Relay VB-12TBU-UC (UL3)	1
WS1	8600035754	EX1900 P01*J01FI-4	1
WS2	8970022640	EX1900 1.5D coaxial cable (1)/FI	1
WS3	8970022650	EX1900 Tefron coaxial cable (1)/FI	1

Screw abbreviations: PH: Pan head
BT, B0: Self-tapping
ZK: Black
NI-ZU: Nickel-Zinc

[COMBINR UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510017920	Connector 1811P342	1
J2	6510017920	Connector 1811P342	1
J3	6510017920	Connector 1811P342	1
J4	6510017920	Connector 1811P342	1
J5	6510003080	Connector RT01T-1.0B	1
J6	6510003080	Connector RT01T-1.0B	1
J7	6510003080	Connector RT01T-1.0B	1
J7	6510003080	Connector RT01T-1.0B	1
L5	6140003290	LR-365	1
EP1	6910011330	Terminal OT-009 M3	1
EP2	6910011330	Terminal OT-009 M3	1
EP5	0910049250	B5039 (#1900-3D)	1
MP1	8930000700	Tread spacer (T)	1
MP2	8810003380	Set screw C M3 ×10	2
WS1	8970022610	EX1900 0.8D coaxial cable (3)/CO	1
WS2	8600035730	EX1900 P01*J08CO	1

6-4 POWER UNIT DISASSEMBLY

[PA UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
W1	8900006990	Cable OPC-683 (N:10 L:110)	1
W2	8900007360	Cable OPC-711 (N:10 L:250)	1
W3	8900006990	Cable OPC-683 (N:10 L:110)	1
W4	8900007360	Cable OPC-711 (N:10 L:250)	1
MF1	2710000620	Fan PUDC12Z4-992	1
MF2	2710000620	Fan PUDC12Z4-992	1
MF3	2710000620	Fan PUDC12Z4-992	1
MP1	8930042520	1900 FHS angle	1
MP2	8930042510	1900 RHS angle	1
MP3	8410002123	1900 PA heat sink-3	1
MP4	8810003160	Set screw A M3 × 6	16
MP5	8810008490	Set screw H M2.6 × 8 NI	16
MP6	8810009620	Bind screw BT M3 × 6 ZK	4
MP7	8810009620	Bind screw BT M3 × 6 ZK	6
MP8	8810009620	Bind screw BT M3 × 6 ZK	8
MP9	8930043050	1900 Spacer angle	1
MP10	8810003160	Set screw A M3 × 6	4
MP11	8820000550	Cap-bolt M4 × 8 ZK	12
MP12	8810003360	Set screw C M3 × 6	1
MP13	8810003360	Set screw C M3 × 6	1
MP14	8810003360	Set screw C M3 × 6	1
MP15	8810003360	Set screw C M3 × 6	1
MP16	8810003360	Set screw C M3 × 6	1
MP17	8810003360	Set screw C M3 × 6	1
MP18	8810003360	Set screw C M3 × 6	1
MP19	8810003360	Set screw C M3 × 6	1
MP21	8930047400	1900 C-sheeet	1
MP22	8930047410	1900 D-sheet	1
WS1	8970022930	EX1900 J boad (special) (4)/PA	1

Screw abbreviations: PH: Pan head
BT: Self-tapping
ZK: Black
NI: Nickel

[PA-1 BOARD]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J2	6510017920	Connector 1811P342	1
J5	6510003390	Connector B03B-EH-S	1
J6	6510003080	Connector RT01T-1.0B	1
EP1	6910011330	Terminal OT-009 M3	1
EP2	6910011330	Terminal OT-009 M3	1
EP3	6910000640	Bead FSOH090RN	1
WS1	8970022531	EX1900 J boad set-1 (1)/PA-1	1
WS2	8970022540	EX1900 1.5D coaxial cable (1)/PA-1	1

[PA-2 BOARD]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J2	6510017920	Connector 1811P342	1
J5	6510003390	Connector B03B-EH-S	1
J6	6510003080	Connector RT01T-1.0B	1
EP1	6910011330	Terminal OT-009 M3	1
EP2	6910011330	Terminal OT-009 M3	1
EP3	6910000640	Bead FSOH090RN	1
WS1	8970022551	EX1900 J boad set-1 (1)/PA-2	1
WS2	8970022560	EX1900 1.5D coaxial cable (1)/PA-2	1

[PA-3 BOARD]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J2	6510017920	Connector 1811P342	1
J5	6510003390	Connector B03B-EH-S	1
J6	6510003080	Connector RT01T-1.0B	1
EP1	6910011330	Terminal OT-009 M3	1
EP2	6910011330	Terminal OT-009 M3	1
EP3	6910000640	Bead FSOH090RN	1
WS1	8970022571	EX1900 J boad set-1 (1)/PA-3	1
WS2	8970022580	EX1900 1.5D coaxial cable (1)/PA-3	1

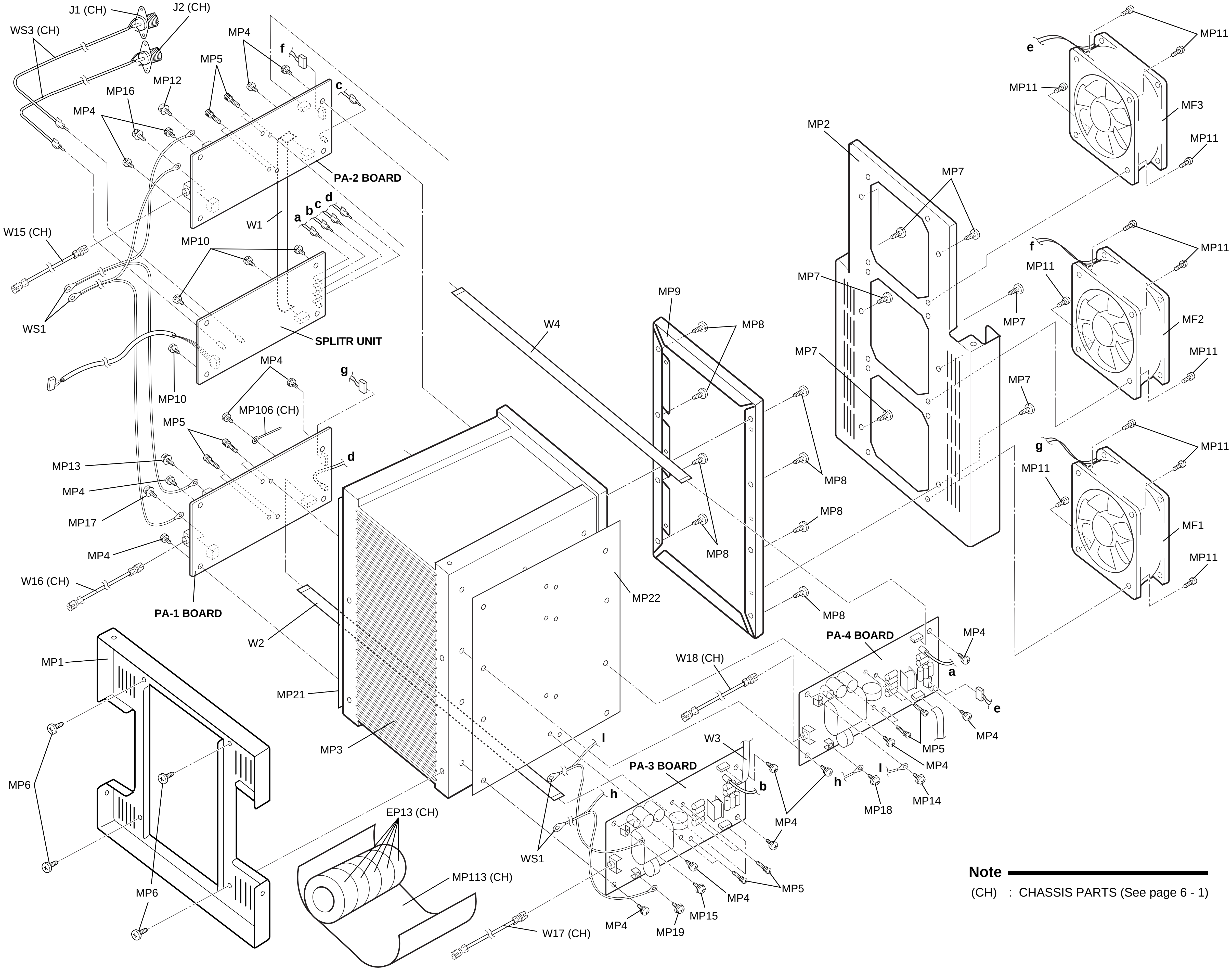
[SPLITR UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510007020	Connector TMP-J01X-V6	1
J2	6510007020	TMP-J01X-V6	1
J4	6510007020	TMP-J01X-V6	1
J5	6510007020	TMP-J01X-V6	1
J6	6510007020	TMP-J01X-V6	1
J7	6510007020	TMP-J01X-V6	1
J8	6510007020	TMP-J01X-V6	1
RL1	6330001330	AG 201344	1
RL2	6330000470	NR-HD (12V) AE5343	1
WS1	8600035721	EX1900 P01*J03*09SP-1	1

[PA-4 BOARD]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J2	6510017920	Connector 1811P342	1
J5	6510003390	Connector B03B-EH-S	1
J6	6510003080	Connector RT01T-1.0B	1
EP1	6910011330	Terminal OT-009 M3	1
EP2	6910011330	Terminal OT-009 M3	1
EP3	6910000640	Bead FSOH090RN	1
WS1	8970022591	EX1900 Jboad set-1(1)/PA-4	1
WS2	8970022600	EX1900 1.5D coaxial cable (1)/PA-4	1

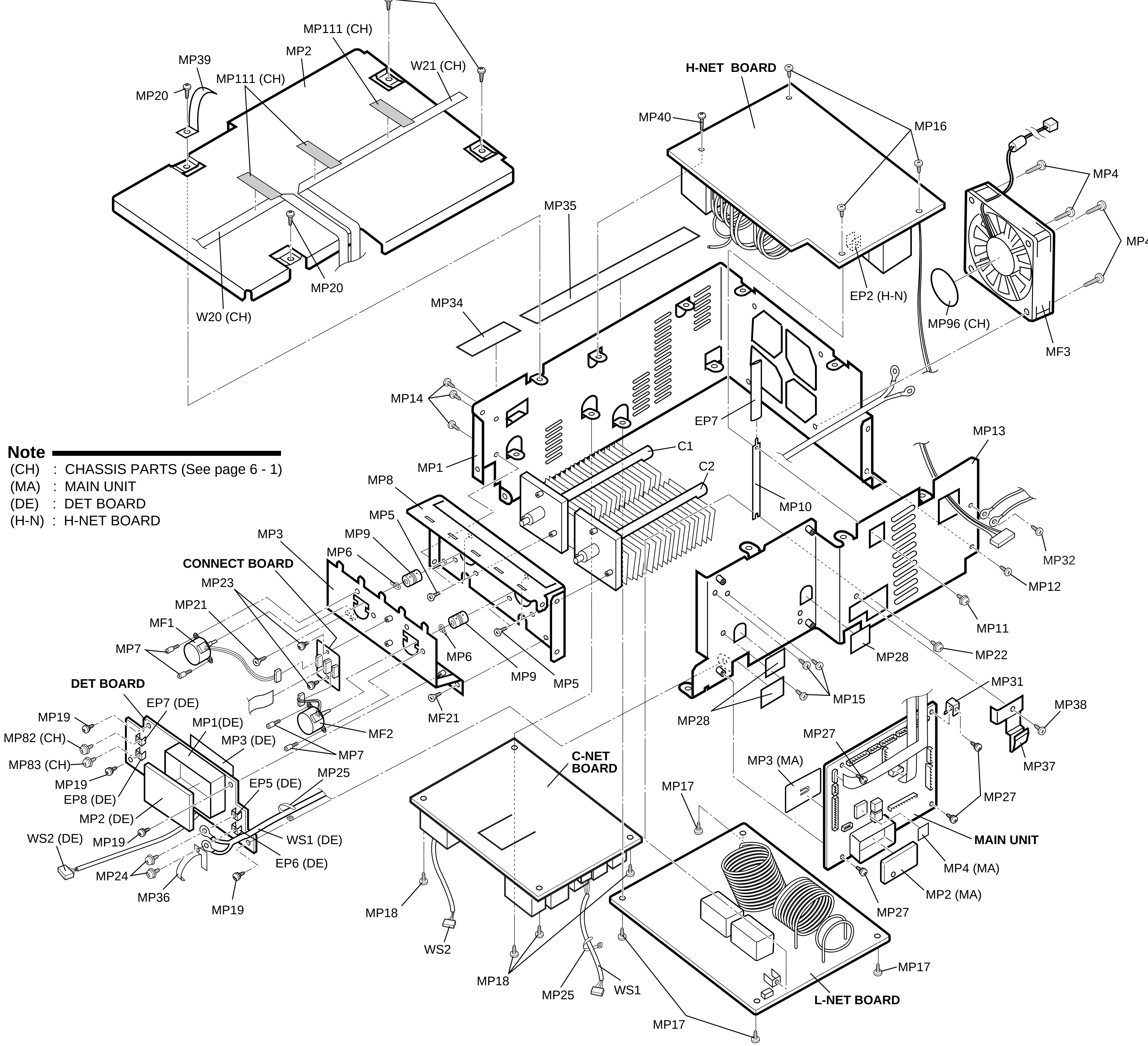
PA UNIT



Note

(CH) : CHASSIS PARTS (See page 6 - 1)

TUNER UNIT



Note
(CH) : CHASSIS PARTS (See page 6 - 1)
(MA) : MAIN UNIT
(DE) : DET BOARD
(H-N) : H-NET BOARD

6-5 TUNER UNIT DISASSEMBLY

[TUNER UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
C1	4620000130	UV55 150pF	1
C2	4620000130	UV55 150pF	1
EP7	9019001020	Enpire tube	1
MF1	2710000460	Stepping motor MP28GA	1
MF2	2710000460	Stepping motor MP28GA	1
MF3	2710000630	Fan FBA08T12HC (w/beadscore)	1
MP1	8510011322	1900 A-TUN case-2	1
MP2	8510011351	1900 A-TUN cover-1	1
MP3	8930044041	1900 A-motor angle-1	1
MP4	8810006500	Bind screw M4 × 20 ZK	4
MP5	8810002160	Screw FH M3 × 5	6
MP6	8930030111	1414 Plate-1	2
MP7	8820000880	1528 Screw	4
MP8	8930044030	1900 TUN angle	1
MP9	8950003200	UJ6-5 (univ. cuppling)	2
MP10	8930044050	1900 CU plate	1
MP11	8810002160	Screw FH M3 × 5	1
MP12	8810009620	Bind screw BT M3 × 6 ZK	1
MP13	8510011332	1900 B-TUN case-2	1
MP14	8810009620	Tapping screw bind B0 M3 × 6 ZK(BT)	3
MP15	8810009620	Tapping screw bind B0 M3 × 6 ZK(BT)	3
MP16	8810009620	Tapping screw bind B0 M3 × 6 ZK(BT)	3
MP17	8810008660	Tapping screw bind PH B0 M3 × 8 NI-ZU (BT)	4
MP18	8810009620	Tapping screw bind B0 M3 × 6 ZK(BT)	4
MP19	8810003160	Set screw A M3 × 6	4
MP20	8810008660	Tapping screw bind PH B0 M3 × 8 NI-ZU (BT)	4
MP21	8810009310	Tapping screw bind PH B0 M3 × 6 NI-ZU (BT)	2
MP22	8810003380	Set screw C M3 ×10	1
MP23	8810003160	Set screw A M3 × 6	2
MP24	8810003360	Set screw C M3 × 6	2
MP25	8950000180	Cable tie-80	2
MP26	6910008240	Clip 59TN4772	2
MP27	8810003160	Set screw A M3 × 6	4
MP28	8930007100	Alumi-sheet C	3
MP31	8930047180	1900 A-grounding plate	1
MP32	8810008660	Tapping screw bind PH B0 M3 × 8 NI-ZU (BT)	1
MP34	8950001770	Filamen tape 9510 12 × 40	1
MP35	8950004950	Filamen tape 9510 12 × 195	1
MP36	8930047810	1900 Tun spring	1
MP37	8930047190	1900 B-grounding plate	1
MP38	8810008630	Tapping screw bind PH B0 M3 × 6 NI-ZU (BT)	1
MP39	8930004070	Grounding spring (C)	1
MP40	8930008660	Tapping screw bind PH B0 M3 × 8 NI-ZU (BT)	1
WS1	8970022910	EX1900 Special coxial cable (1)/TU	1

Screw abbreviations: PH: Pan head FH: Flat head
BT: Self-tapping ZK: Black NI:Nickel

[DET BOARD]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
EP5	6910011330	Terminal OT-009 M3	1
EP6	6910011330	Terminal OT-009 M3	1
EP7	6910011330	Terminal OT-009 M3	1
EP8	6910011330	Terminal OT-009 M3	1
MP1	8510001080	Shild case (A) SX117	1
MP2	8510001101	Shild case (A) cover (A)-1	1
MP3	8510004370	506 Shild plate	1
WS1	8970022630	EX1900 Tefron coaxial cable (2)/DE	1
WS2	8600035821	EX1900 P01*J01DE-1	1

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510003080	Connector RT01T-1.0B	1
J3	6510003450	Connector B09B-EH-S	1
J4	6510003480	Connector B12B-EH-S	1
J6	6510003410	Connector B05B-EH-S	1
J8	6510003490	Connector B13B-EH-S	1
J9	6510003410	Connector B05B-EH-S	1
J10	6510003450	Connector B09B-EH-S	1
J14	6510017650	Connector 52045-1045	1
J17	6510003390	Connector B03B-EH-S	1
J18	6510003410	Connector B05B-EH-S	1
J19	6510003420	Connector B06B-EH-S	1
J20	6510003430	Connector B07B-EH-S	1
J21	6510003440	Connector B08B-EH-S	1
J22	6510003390	Connector B03B-EH-S	1
S3	2260002220	Switch S-1010A	1
S4	2260002220	Switch S-1010A	1
MP1	8510000230	220 Shield case	1
MP2	8510000241	220 Shield case cover-1	1
MP3	8510005581	644 Shield plate-1	1
MP4	8510011820	1900 shield plate	1
RL2	6330001320	Relay AHY103	1
RL3	6330001320	Relay AHY103	1

[L-NET BOARD]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
EP1	6910011340	Terminal OT-010 M3	1
RL1	6330000570	Relay AR-39251	1
RL2	6330000570	Relay AR-39251	1

[H-NET BOARD]

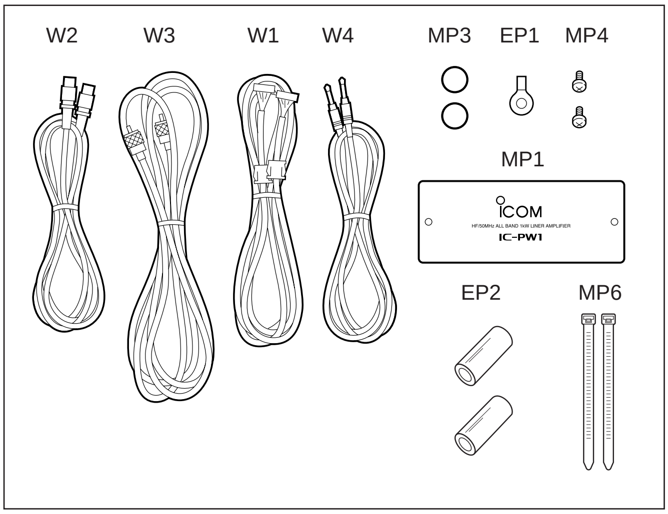
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EP2	6910011340	Terminal OT-010 M3	1
RL1	6330000570	Relay AR-39251	1
RL2	6330000570	Relay AR-39251	1
RL3	6330000570	Relay AR-39251	1
RL4	6330000570	Relay AR-39251	1
RL5	6330000570	Relay AR-39251	1
RL6	6330000570	Relay AR-39251	1
RL7	6330000570	Relay AR-39251	1
RL8	6330000570	Relay AR-39251	1
RL9	6330000570	Relay AR-39251	1
RL10	6330000570	Relay AR-39251	1

[C-NET BOARD]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
RL1	6330001440	Relay VS-12TBU-VD3	1
RL2	6330001440	Relay VS-12TBU-VD3	1
RL3	6330000570	Relay AR-39251	1
RL4	6330001490	Relay VB-12MBU-UC (UL3)	1
RL5	6330001490	Relay VB-12MBU-UC (UL3)	1
RL6	6330001490	Relay VB-12MBU-UC (UL3)	1
RL7	6330000570	Relay AR-39251	1
RL8	6330001490	Relay VB-12MBU-UC (UL3)	1
RL9	6330001490	Relay VB-12MBU-UC (UL3)	1
RL10	6330001490	Relay VB-12MBU-UC (UL3)	1

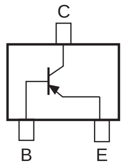
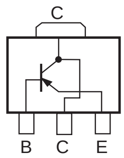
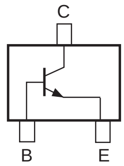
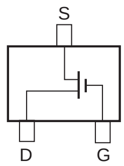
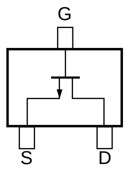
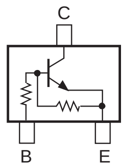
[ACCESSORIES]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
W1	8900007580	Cable OPC-730	1
W2	8900002260	Cable OPC-104 B	1
W3	8900002270	Cable OPC-125 B	1
W4	8900007290	Cable OPC-718	1
EP1	6510020330	Terminal 5.5-5 pin	1
EP2	6910010480	DL-7C OR-31-15-19H [USA], [EUR]	10
MP1	8310039530	1900 front plate	1
MP3	8930043080	Rubber (hole bush)	2
MP4	8810004430	Screw PH M3 × 6 ZK [EUR-1] only	2
MP6	8950001980	JIG cable tie-140 [EUR-1] only	2
MP7	8310045230	1900 Cable caution rabel(BJ) [EUR-1] only	1

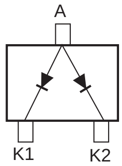
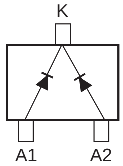
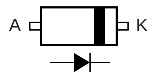
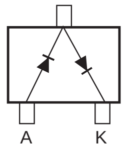
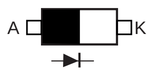
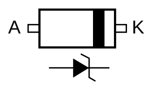
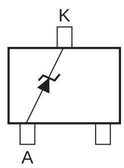


SECTION 7 SEMI-CONDUCTOR INFORMATION

7-1 TRANSISTOR AND FET's

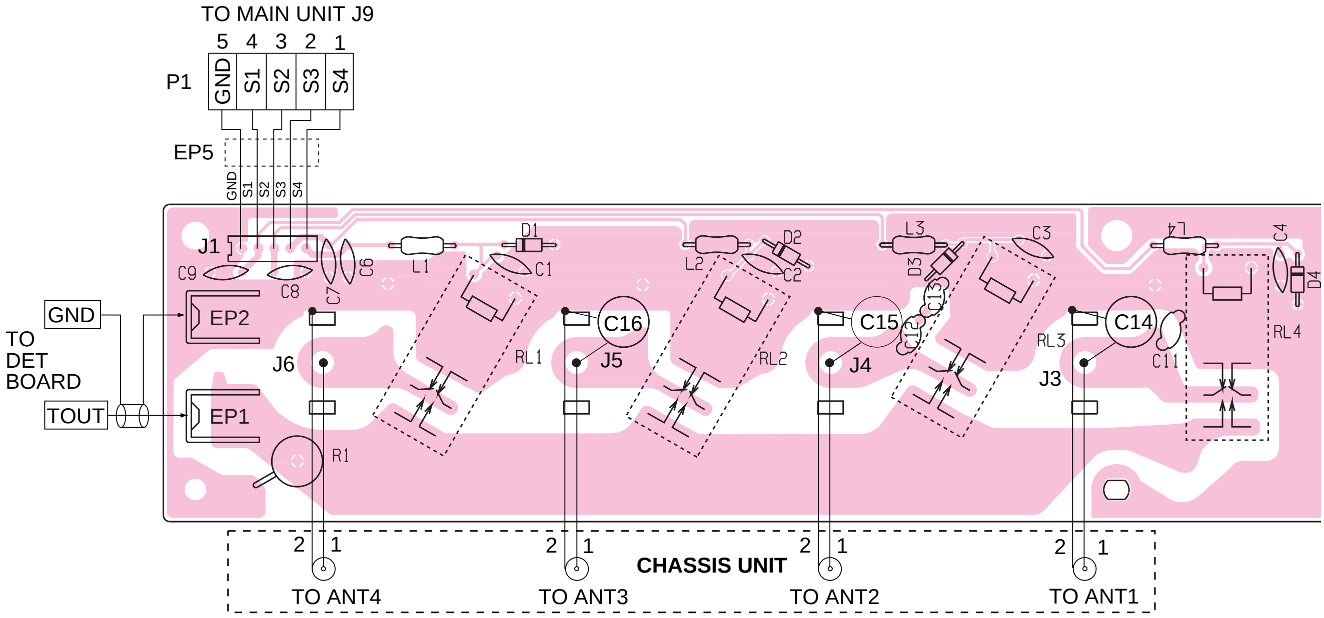
NAME	SYMBOL	INSIDE VIEW
2SA1588-GR 2SA1586-Y	SG SY	
2SB1119S 2SB1123S 2SB1132R	BB BF BAR	
2SC2714-O 2SC4116-GR	QO GR	
2SK302-Y	TY	
2SK515-T1B	X33	
DTC114EE DTC144EE	24 26	

7-2 DIODES

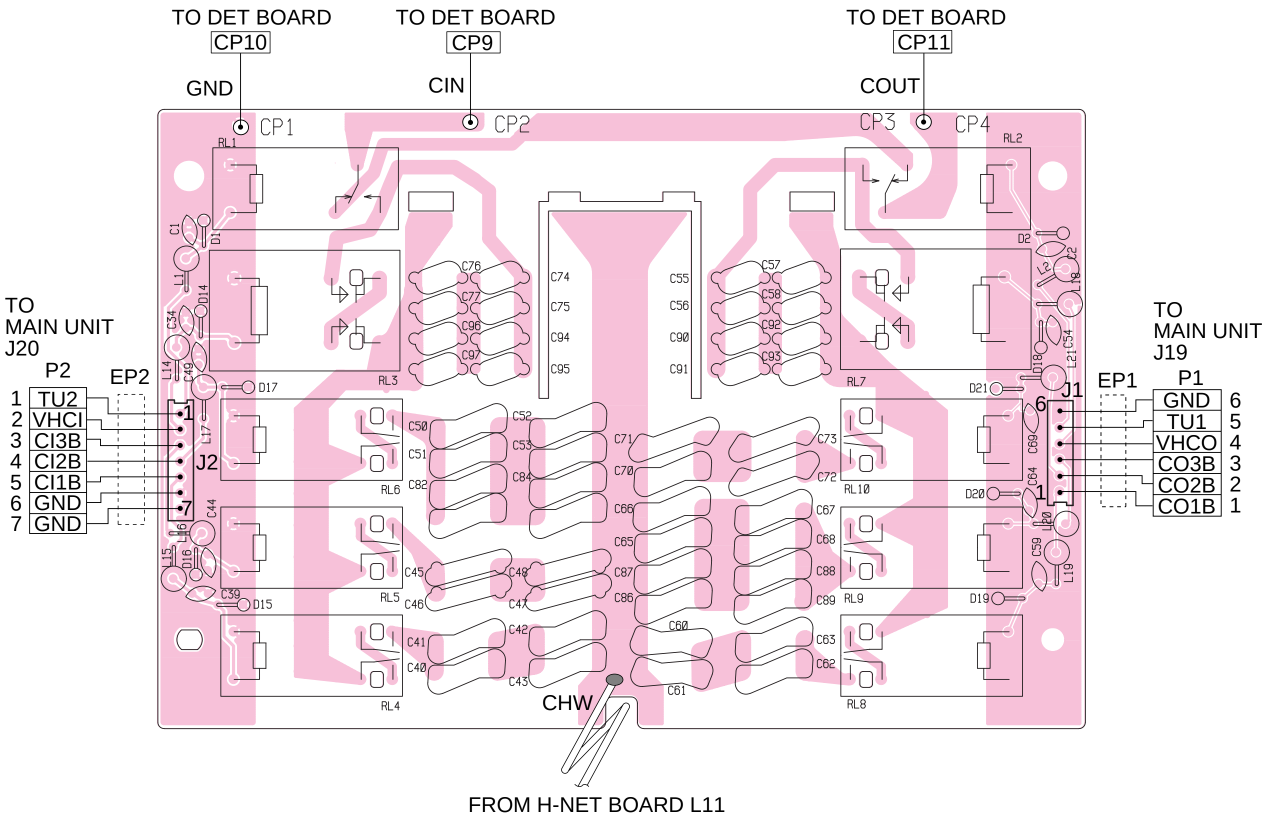
NAME	SYMBOL	INSIDE VIEW
1SS300	A3	
1SS301	B3	
1SS315 1SS373 D2FS4-4063	S2 S4 2FS	
HSM88AS-TR	C1	
MA77	4B	
MA8051-M	5_1	
RD4.7M-T2B2 RD5.1M-T2B2	472 512	

SECTION 8 BOARD LAYOUTS

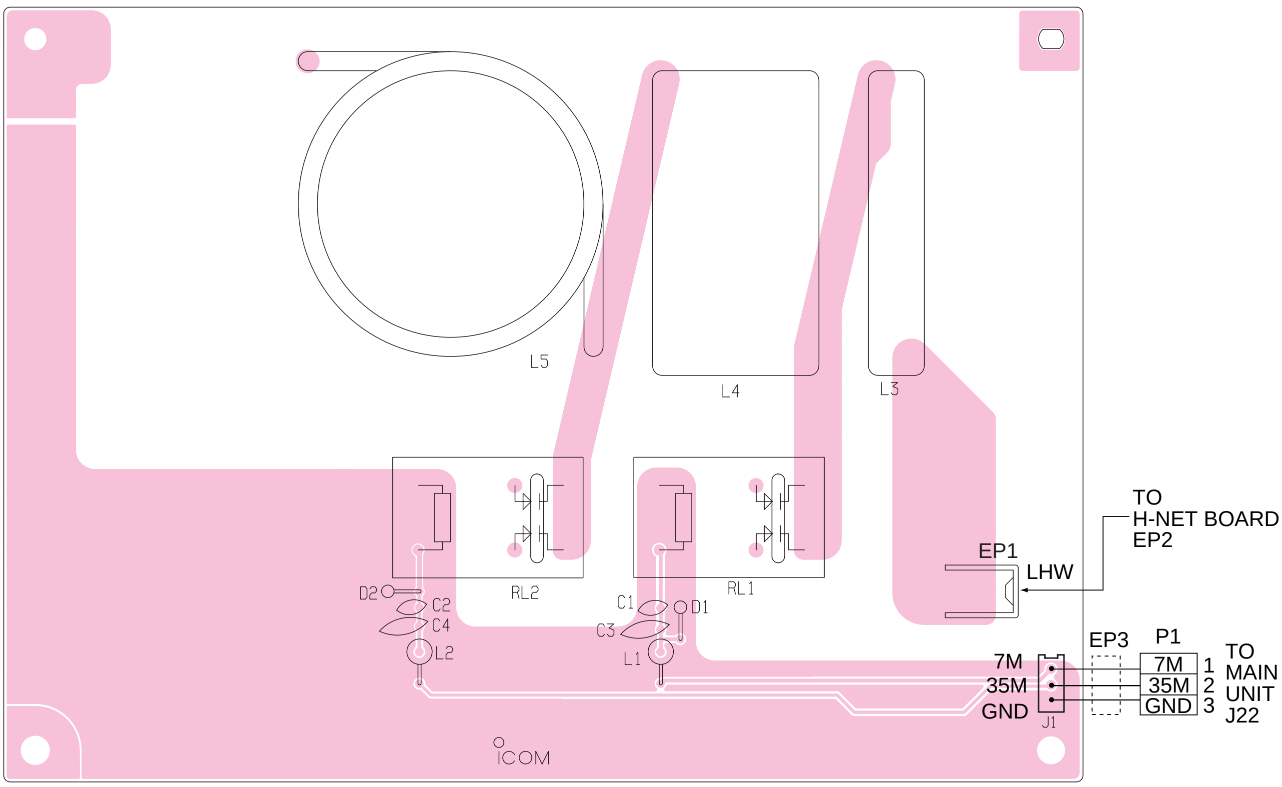
8-1 ANT- SW UNIT



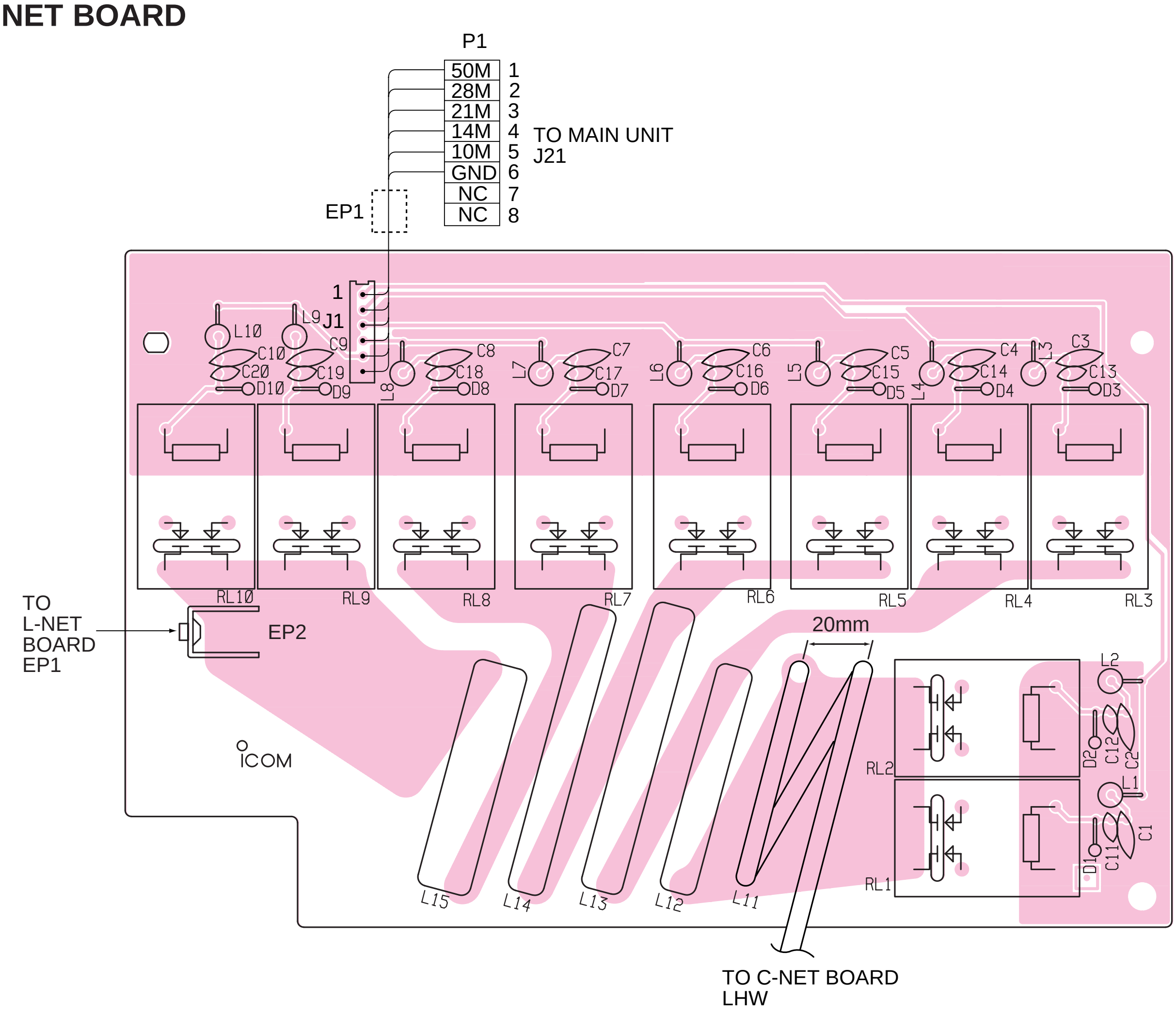
8-2 C-NET BOARD



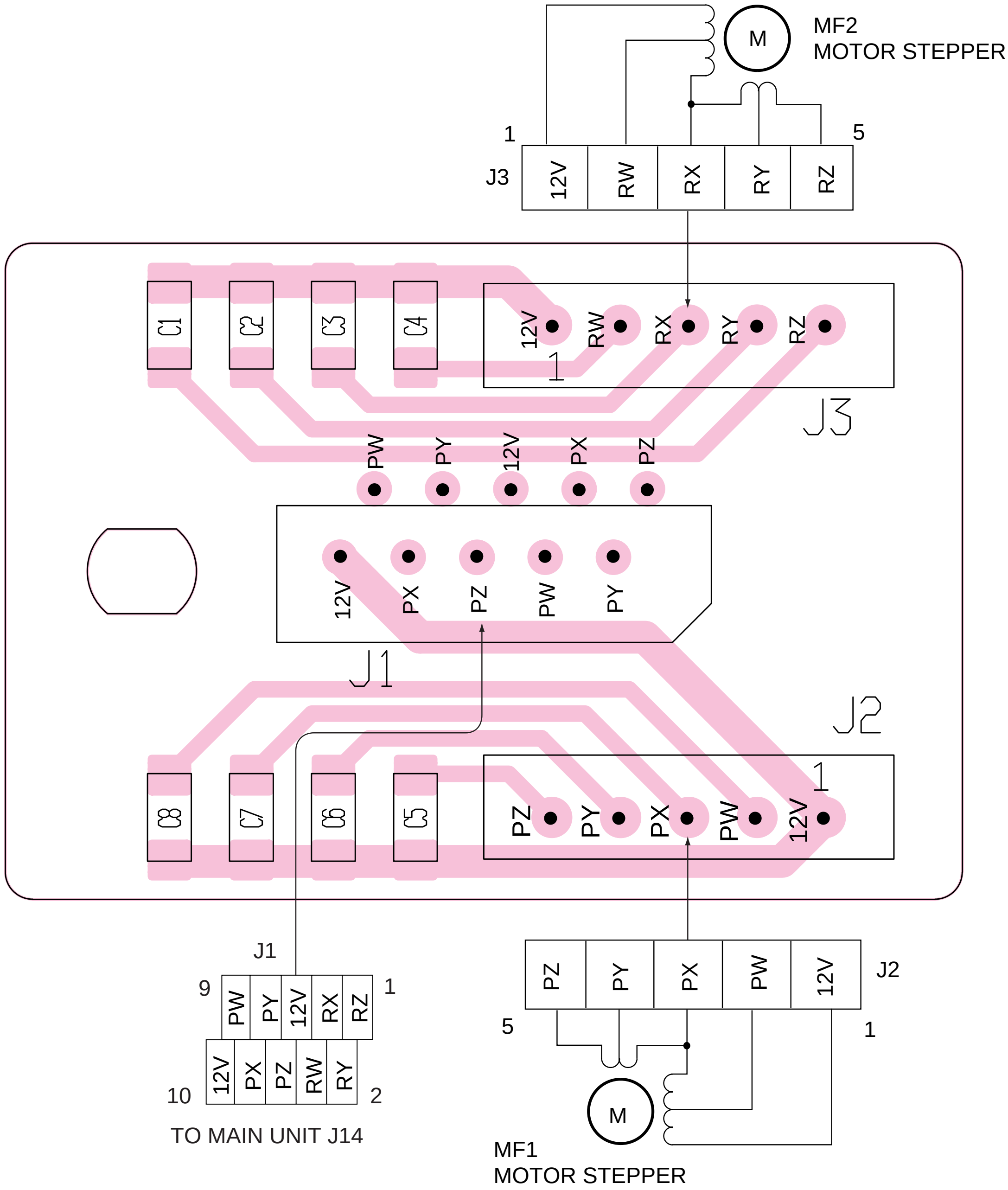
8-3 L-NET BOARD



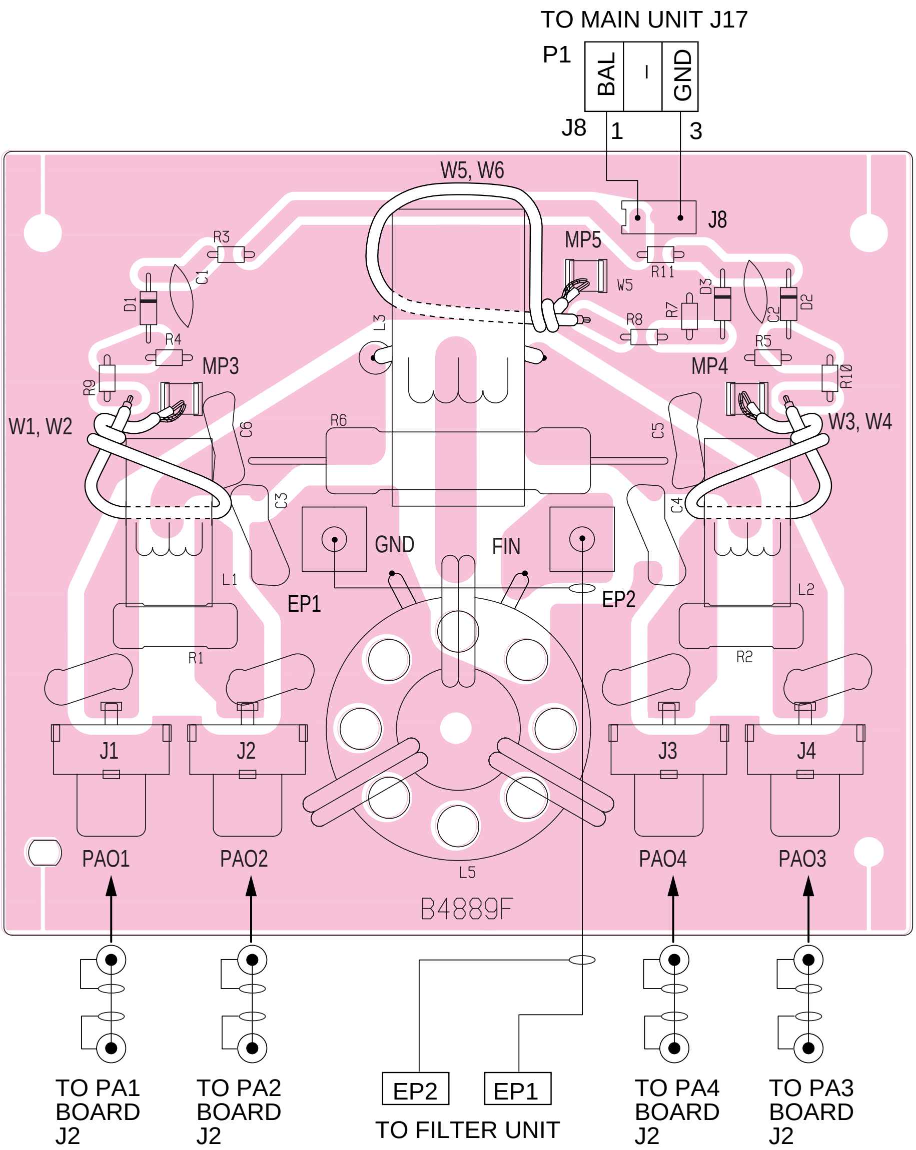
8-4 H-NET BOARD



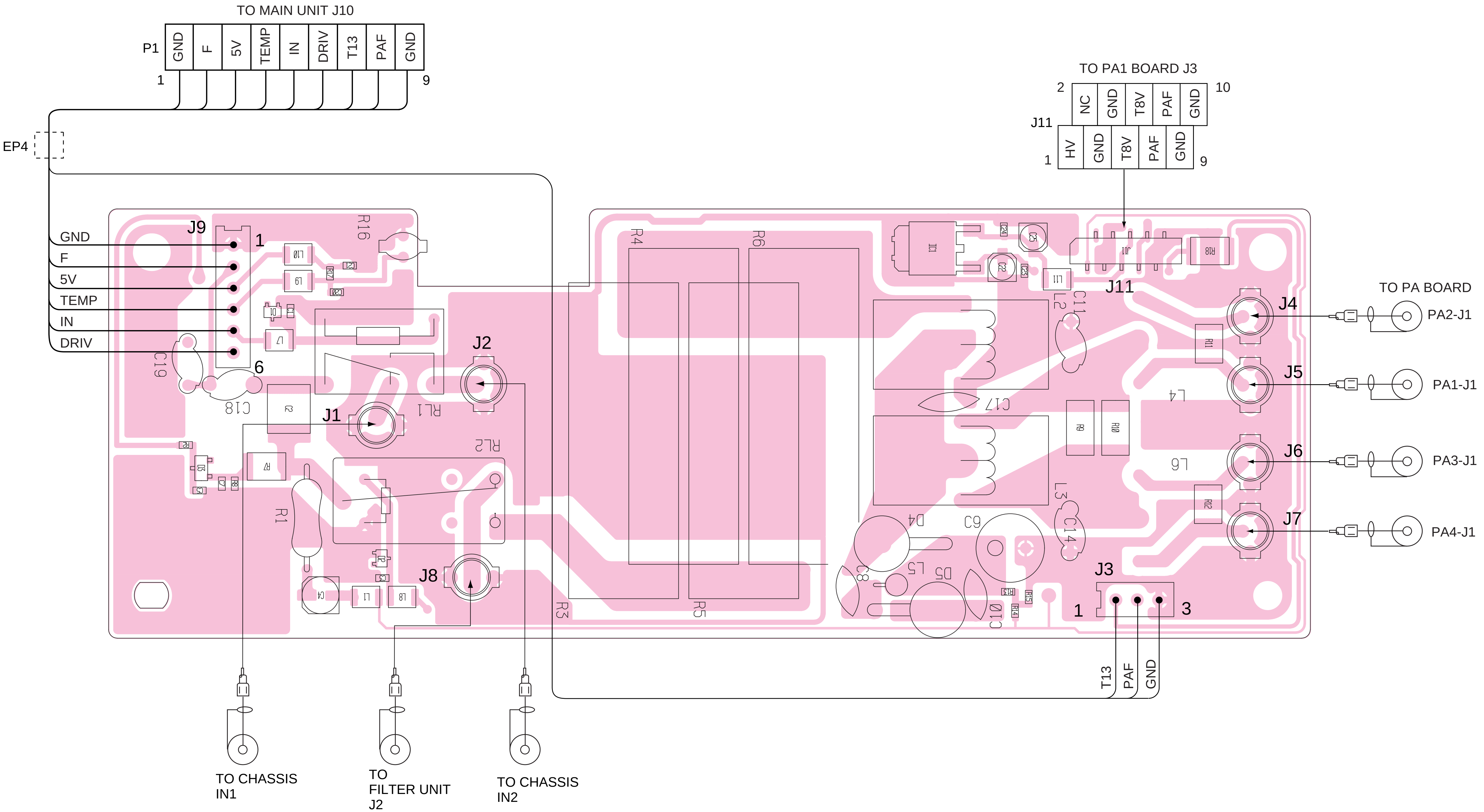
8-5 CONNECT BOARD



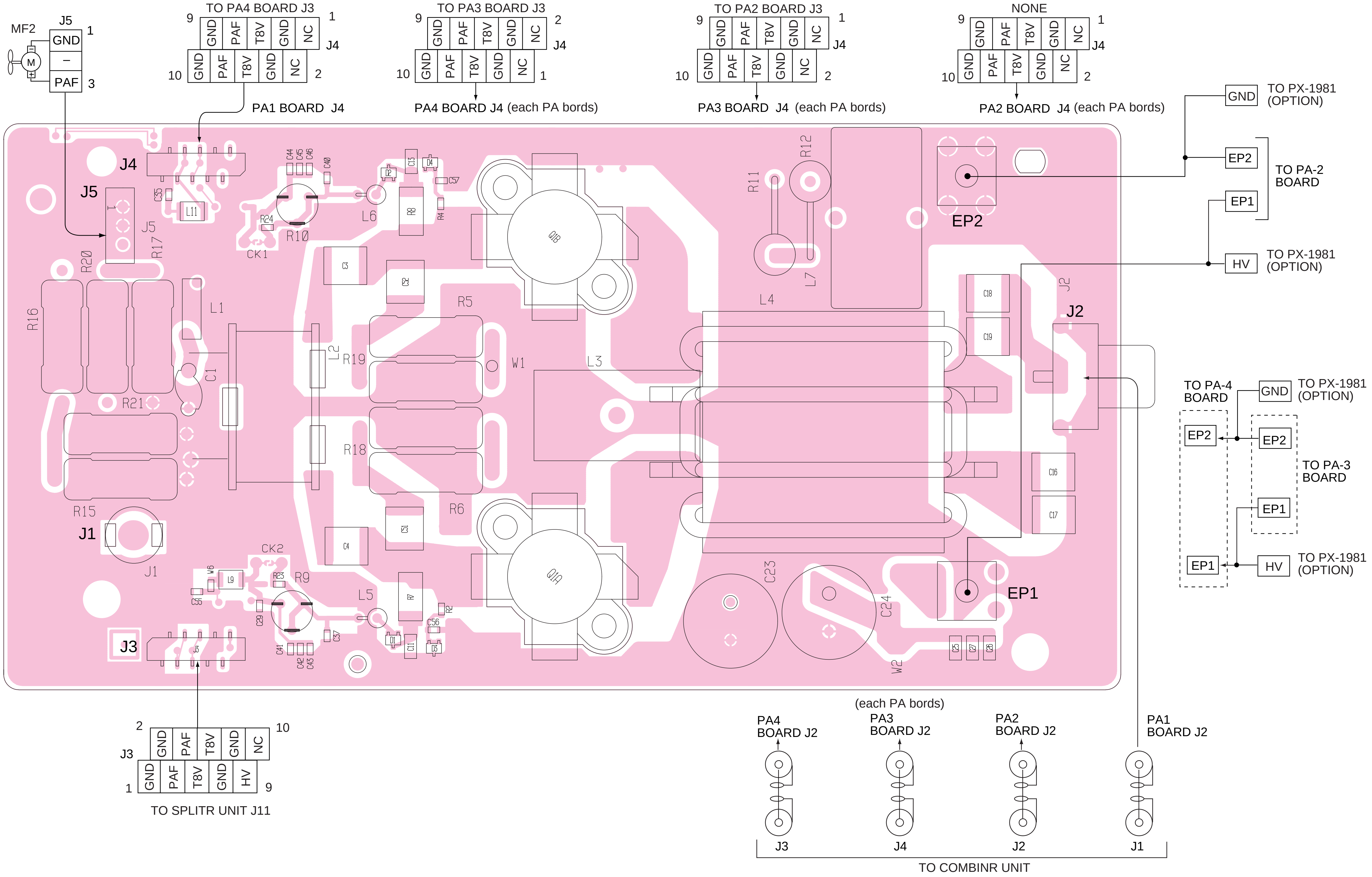
8-6 COMBINR UNIT



8-7 SPLITR UNIT

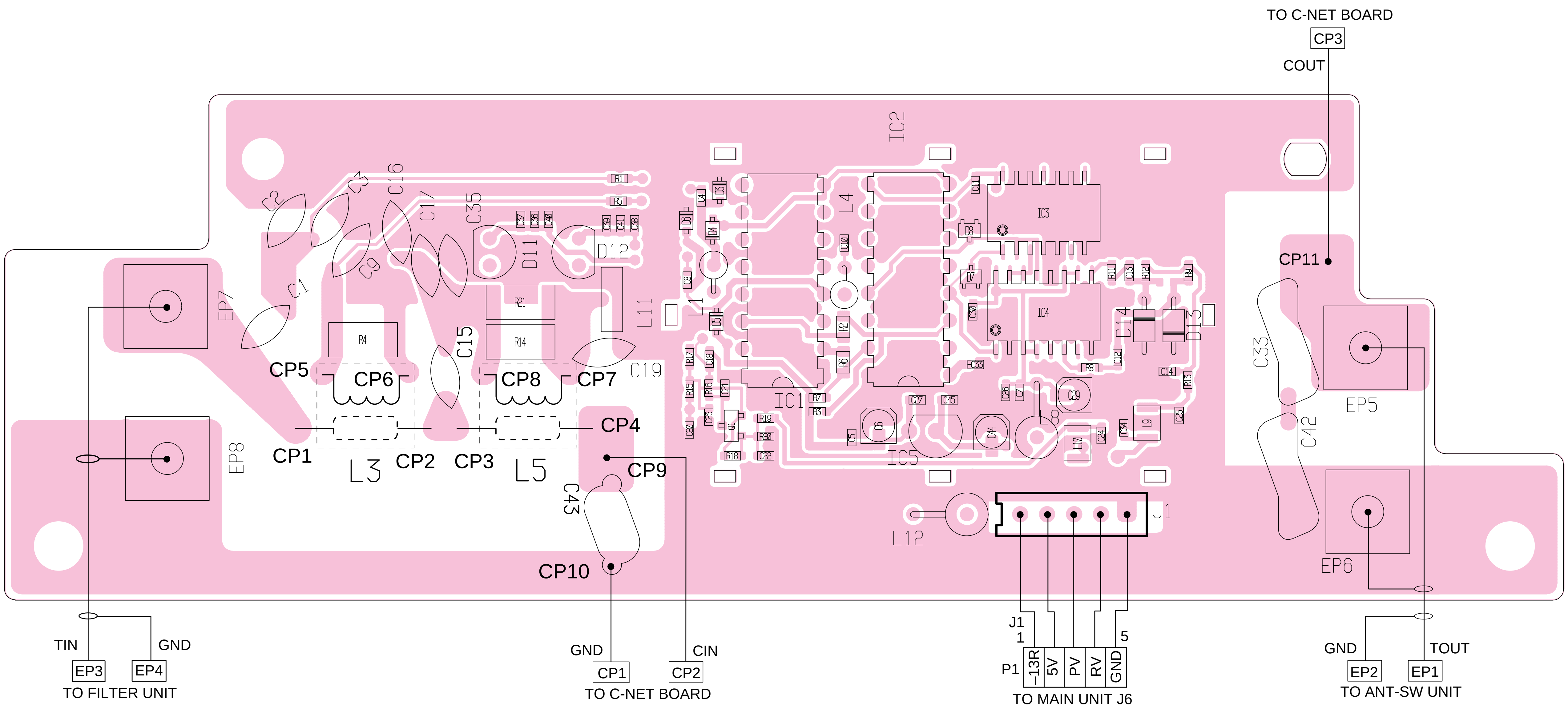


8-8 PA UNIT



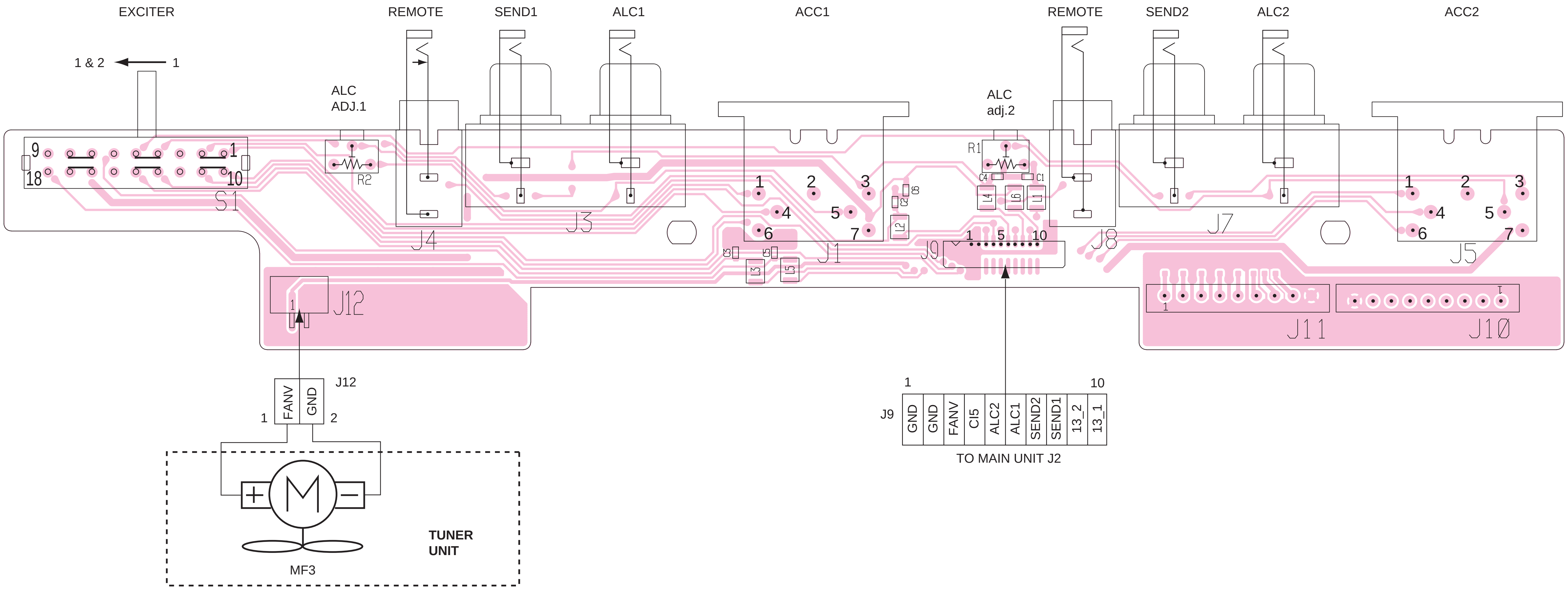
TO PA4 BOARD J3
TO PA3 BOARD J3
TO PA2 BOARD J3
NONE
MF2
J5
GND
–
PAF
GND PAF T8V GND NC
J4
PA1 BOARD J4
PA4 BOARD J4 (each PA bords)
PA3 BOARD J4 (each PA bords)
PA2 BOARD J4 (each PA bords)
GND
TO PX-1981 (OPTION)
EP2
EP1
TO PA-2 BOARD
HV
TO PX-1981 (OPTION)
TO PA-4 BOARD
GND
TO PX-1981 (OPTION)
EP2
TO PA-3 BOARD
EP1
HV
TO PX-1981 (OPTION)
J3
GND PAF T8V GND NC
GND PAF T8V GND HV
TO SPLITR UNIT J11
(each PA bords)
PA4 BOARD J2
PA3 BOARD J2
PA2 BOARD J2
PA1 BOARD J2
J3
J4
J2
J1
TO COMBINR UNIT

8-9 DET BOARD



TO C-NET BOARD
CP3
COUT
CP11
EP7
EP8
EP5
EP6
CP5
CP6
CP8
CP7
CP4
CP1
CP2
CP3
CP9
CP10
L3
L5
C43
IC1
IC2
IC5
L12
J1
TIN
GND
EP3
EP4
TO FILTER UNIT
GND
CIN
CP1
CP2
TO C-NET BOARD
J1
1
5
P1
–13R
5V
PV
RV
GND
TO MAIN UNIT J6
GND
TOUT
EP2
EP1
TO ANT-SW UNIT

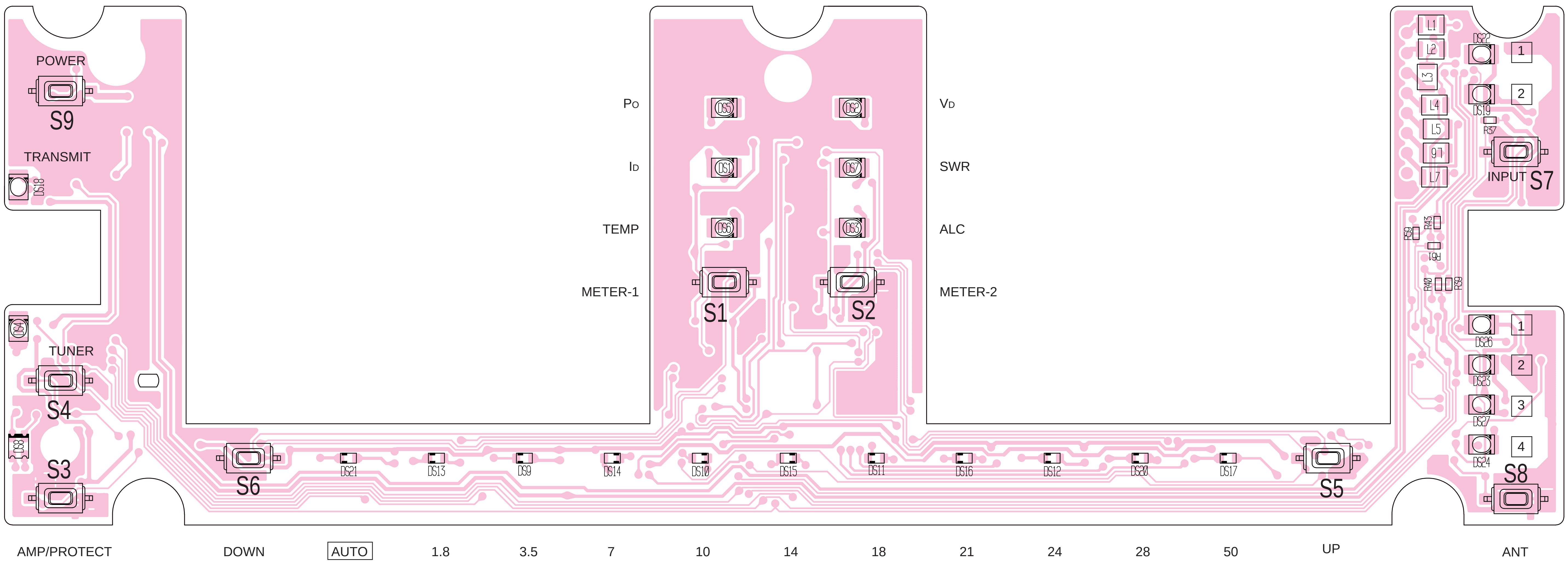
8-10 JACK-1 UNIT



8-11 SW BOARD

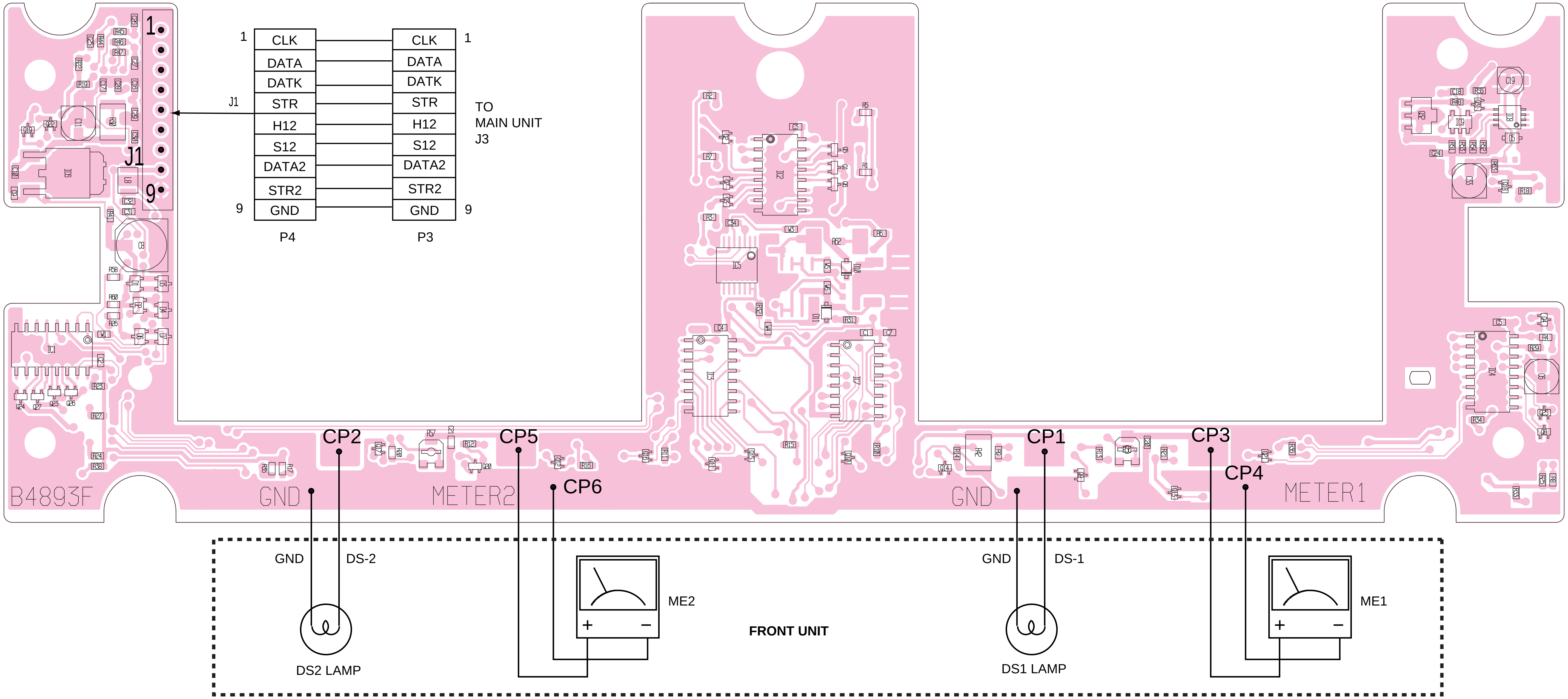
• **TOP VIEW**

The combination of this page and the next page shows the unit layout in the same configuration as the actual P.C. Board.



● **BOTTOM VIEW**

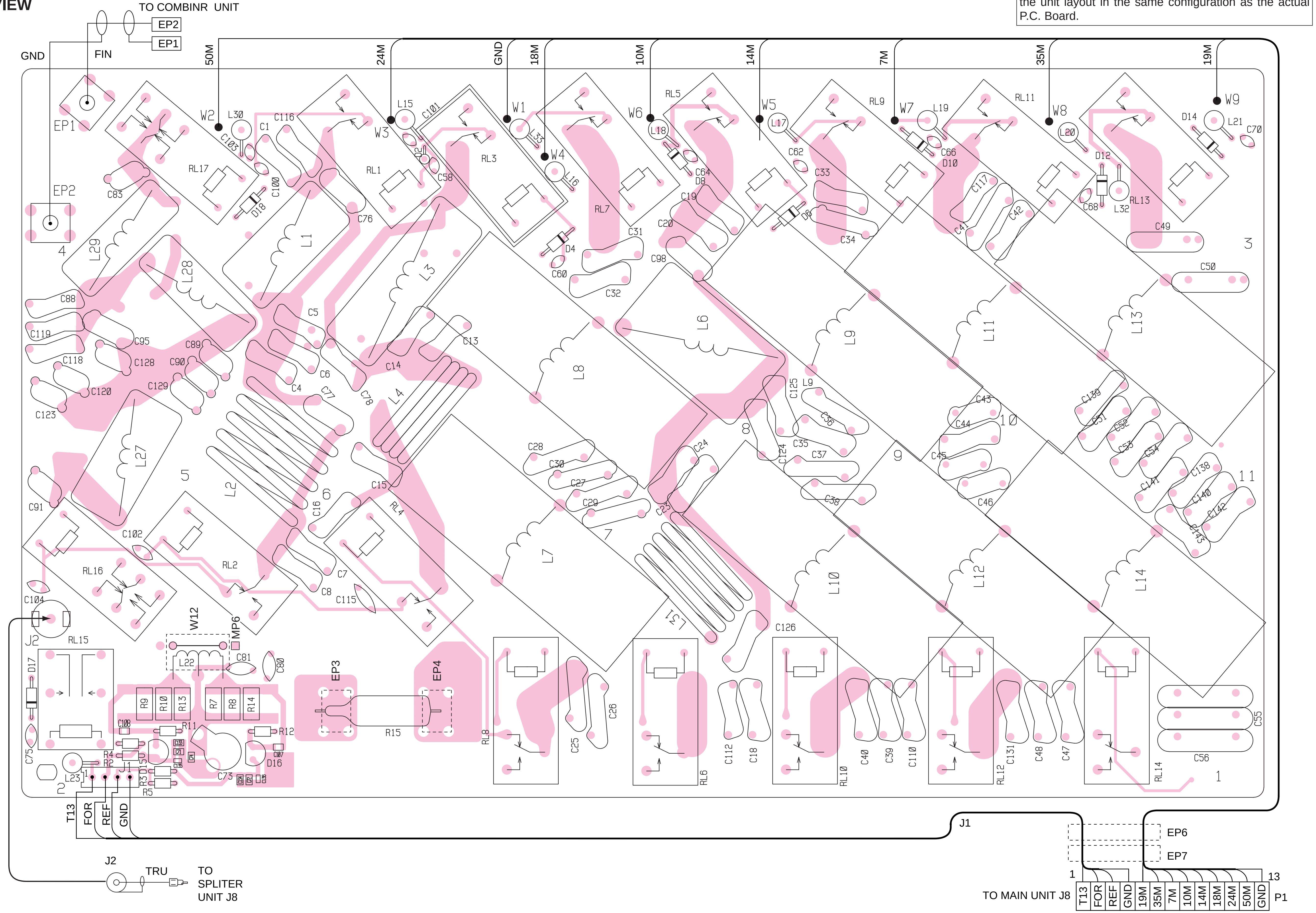
The combination of this page and the previous page shows the unit layout in the same configuration as the actual P.C. Board.



8-12 FILTER UNIT

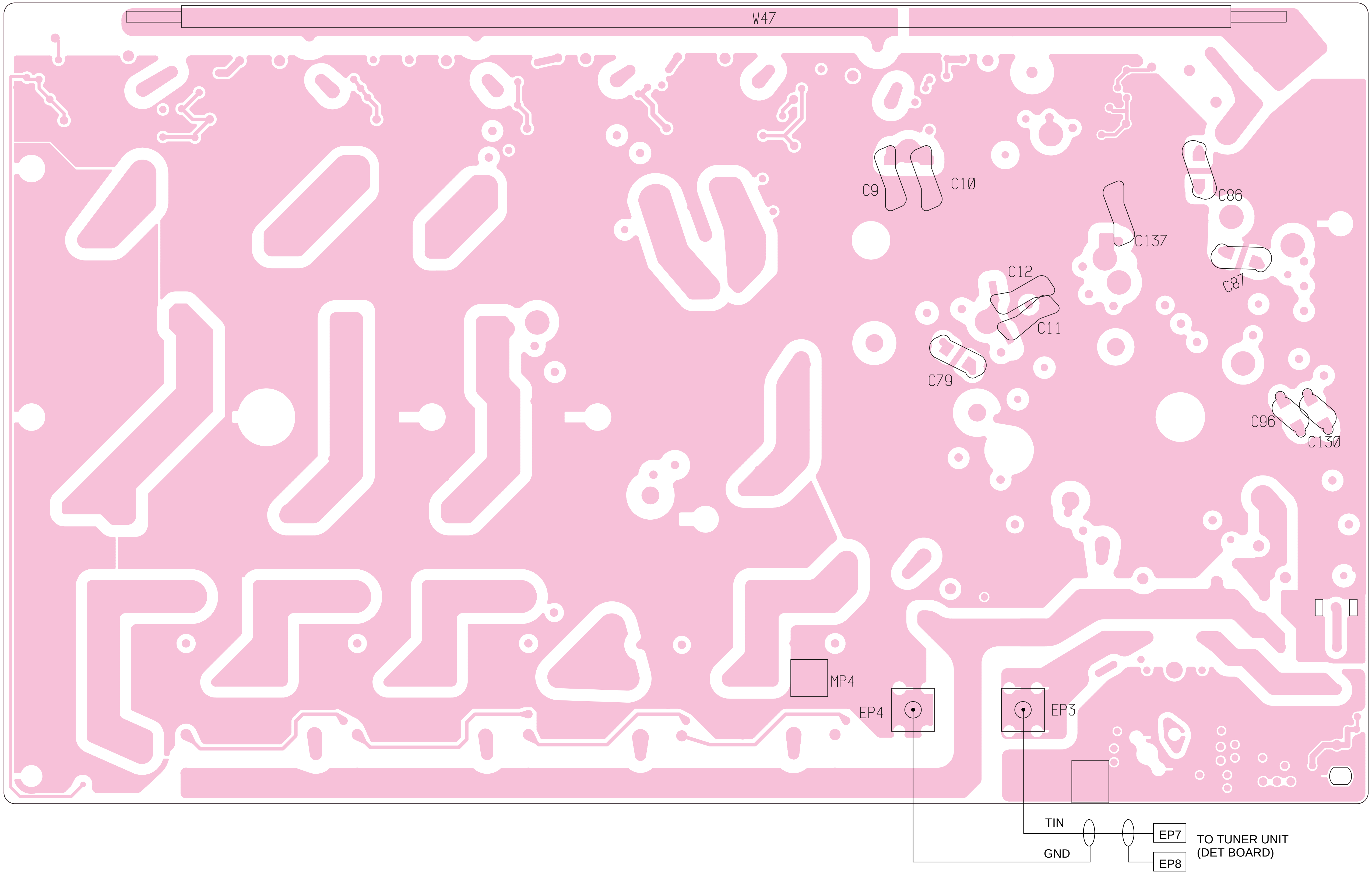
- **TOP VIEW**

The combination of this page and the next page shows the unit layout in the same configuration as the actual P.C. Board.



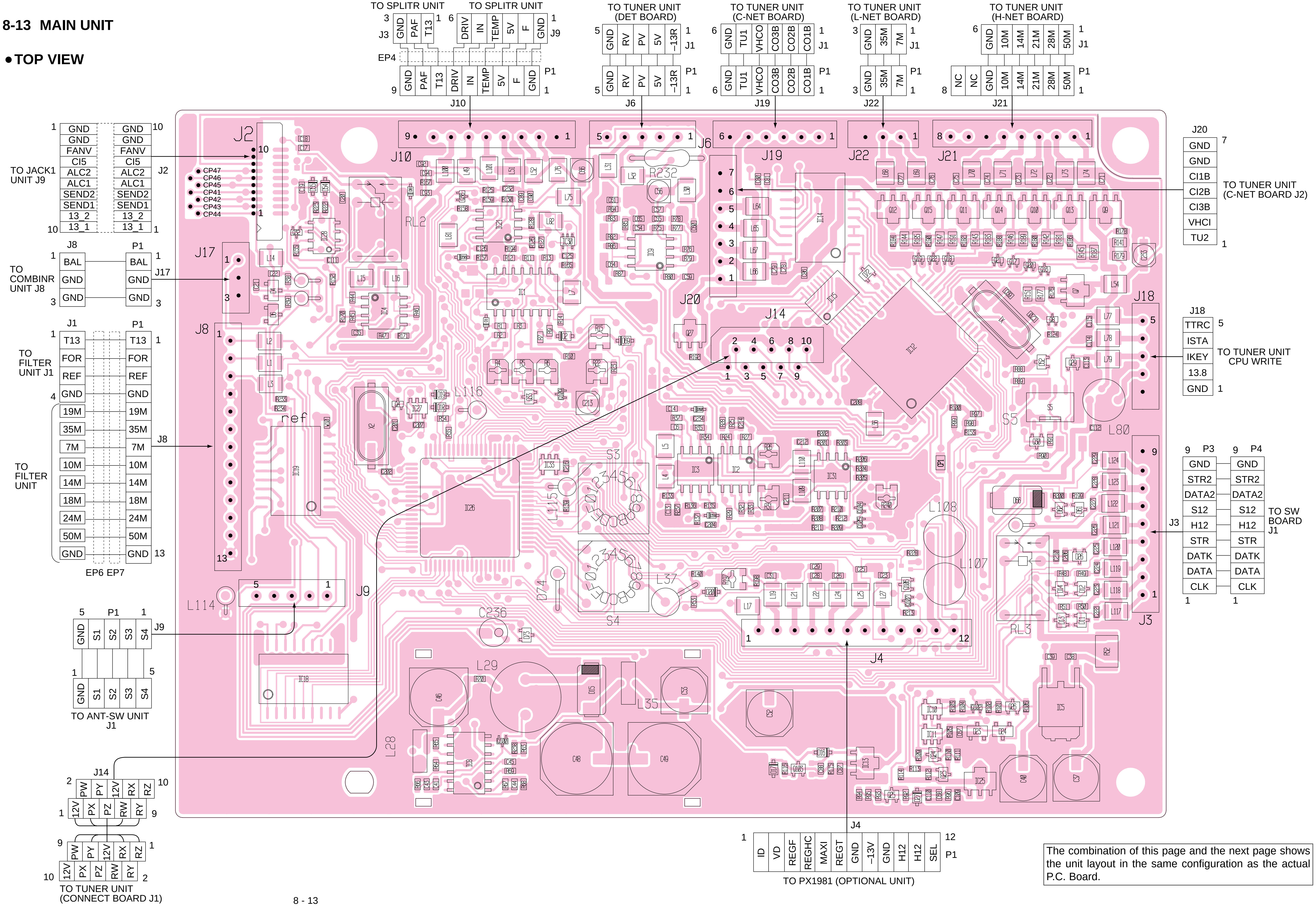
● **BOTTOM VIEW**

The combination of this page and the previous page shows the unit layout in the same configuration as the actual P.C. Board.



8-13 MAIN UNIT

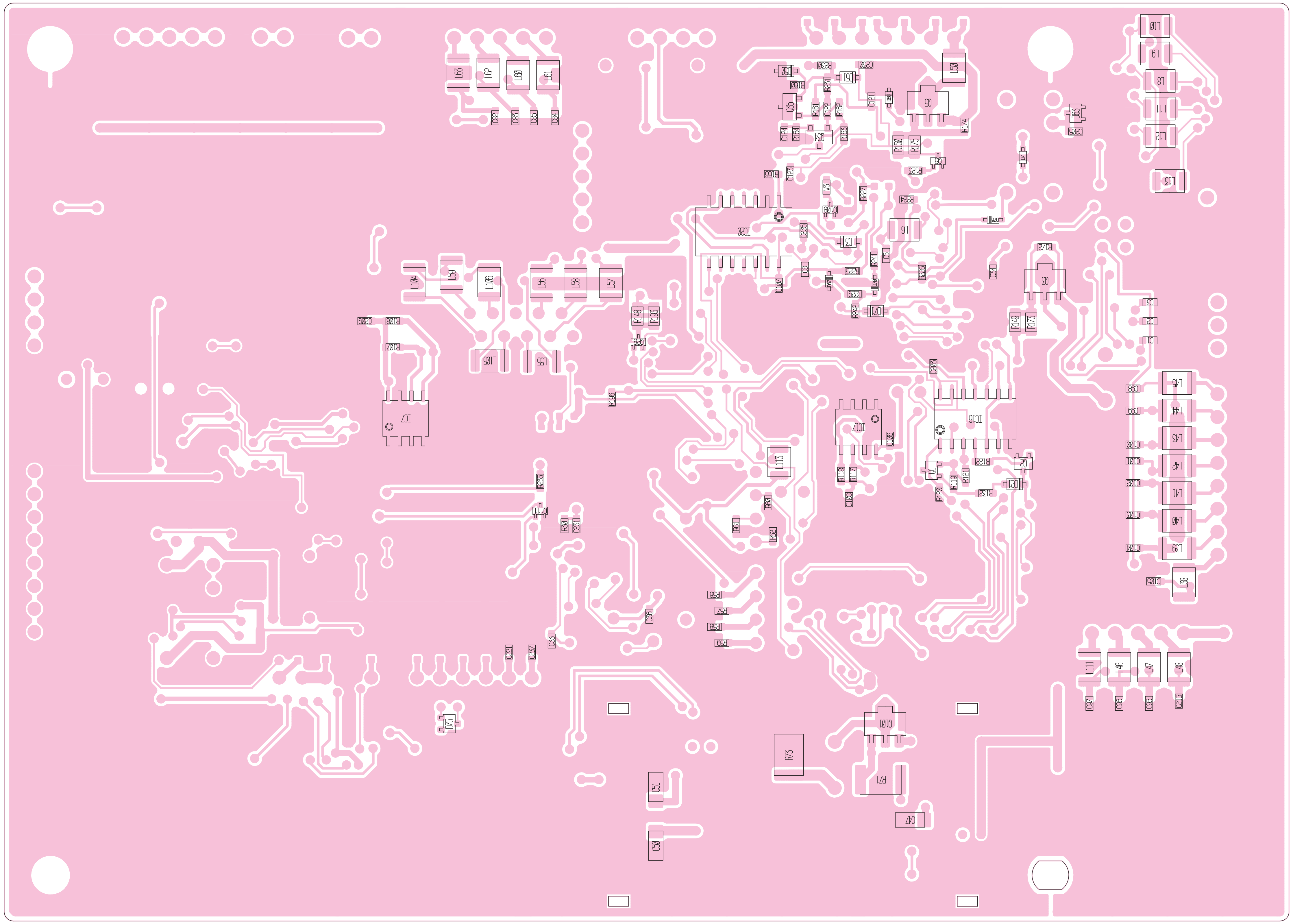
- **TOP VIEW**



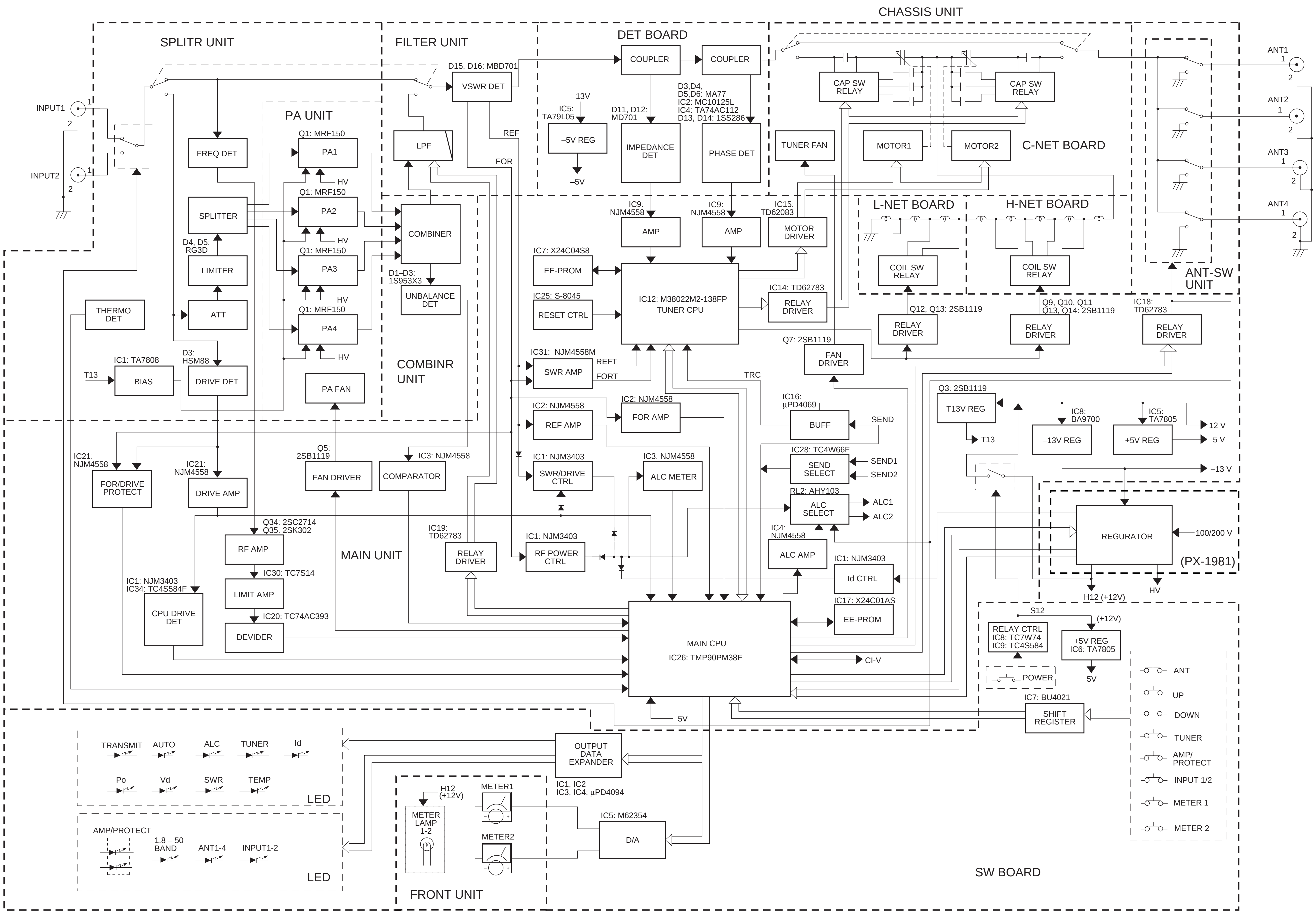
The combination of this page and the next page shows the unit layout in the same configuration as the actual P.C. Board.

● **BOTTOM VIEW**

The combination of this page and the previous page shows the unit layout in the same configuration as the actual P.C. Board.

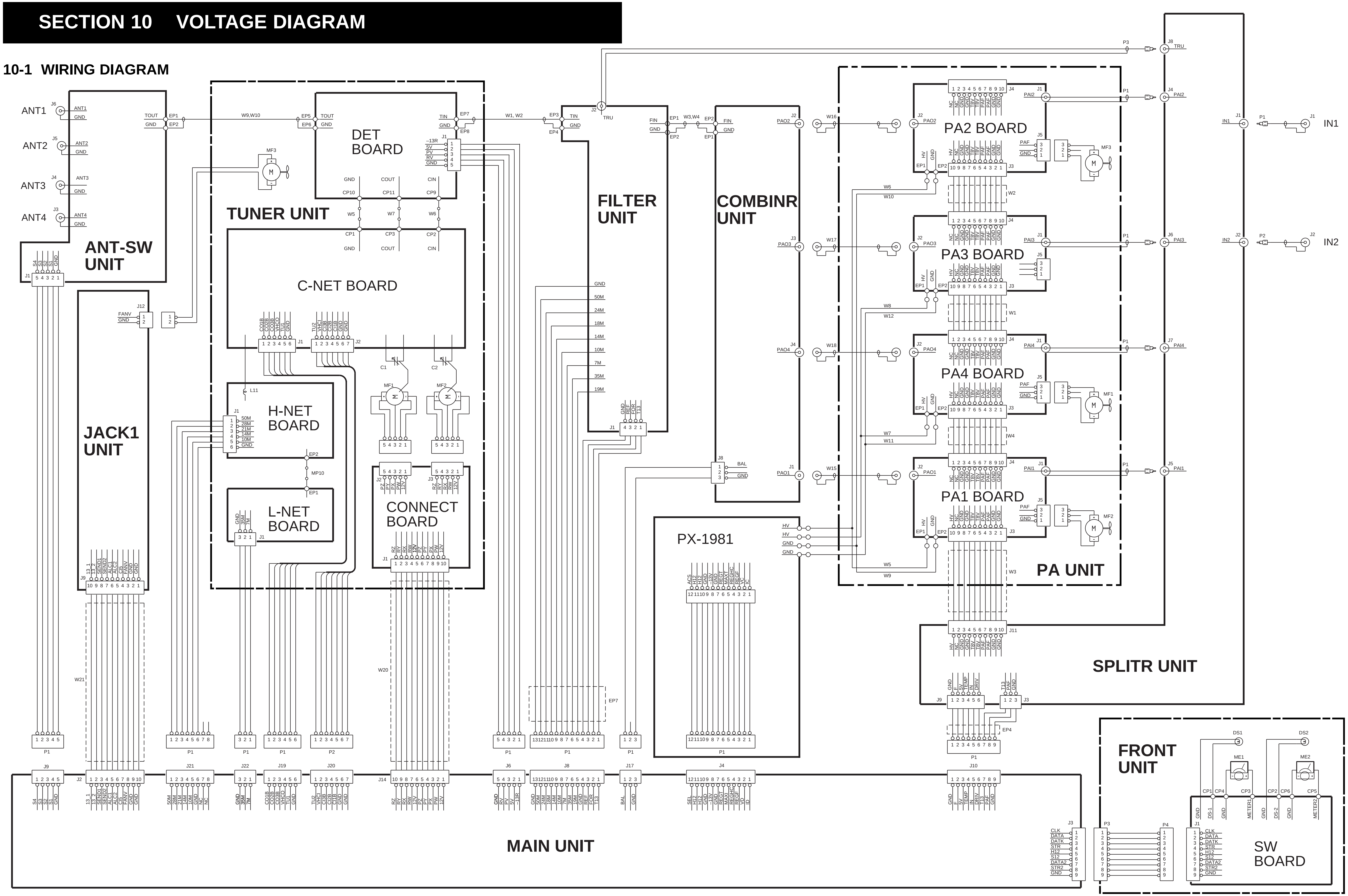


SECTION 9 BLOCK DIAGRAM

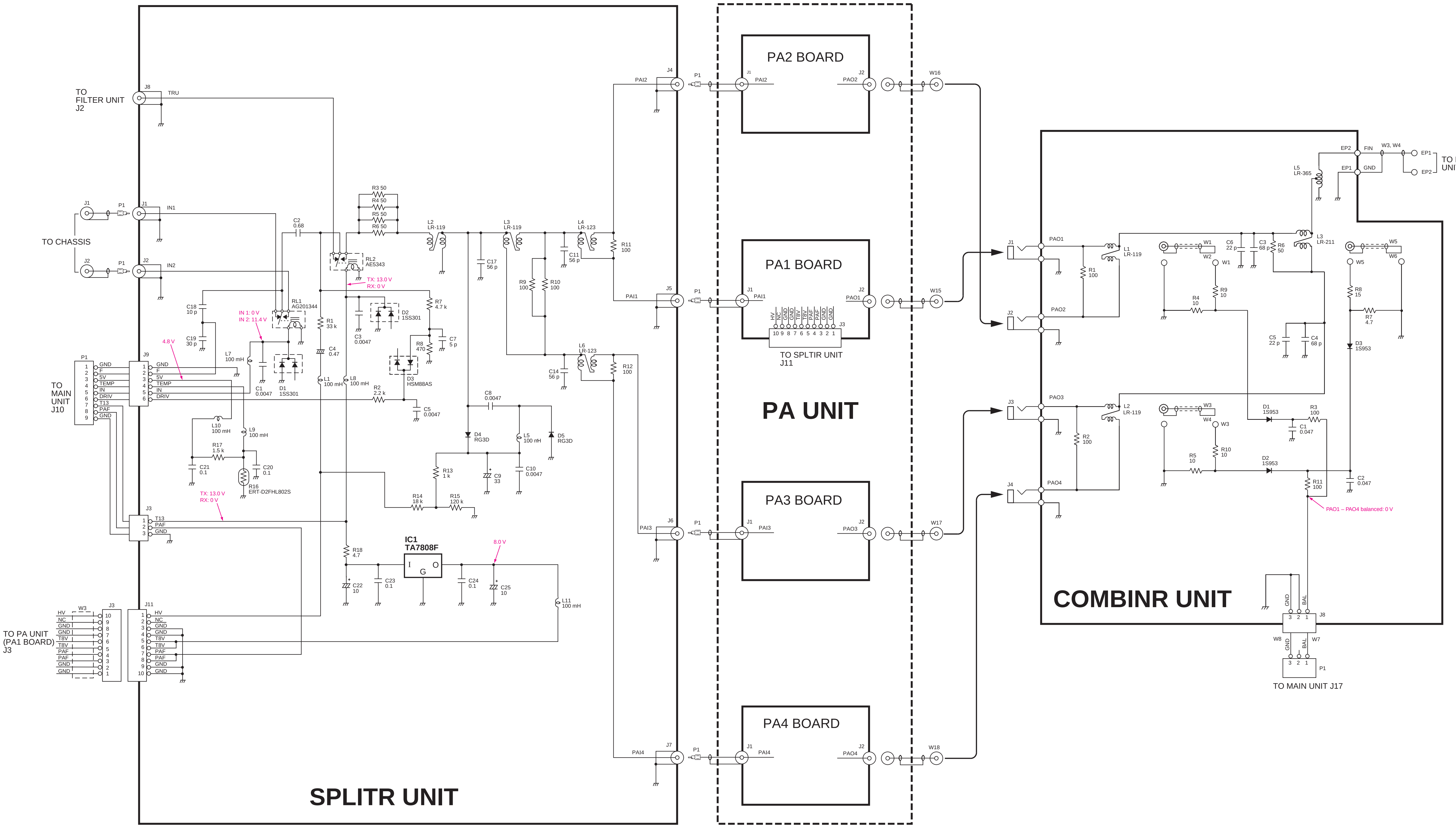


SECTION 10 VOLTAGE DIAGRAM

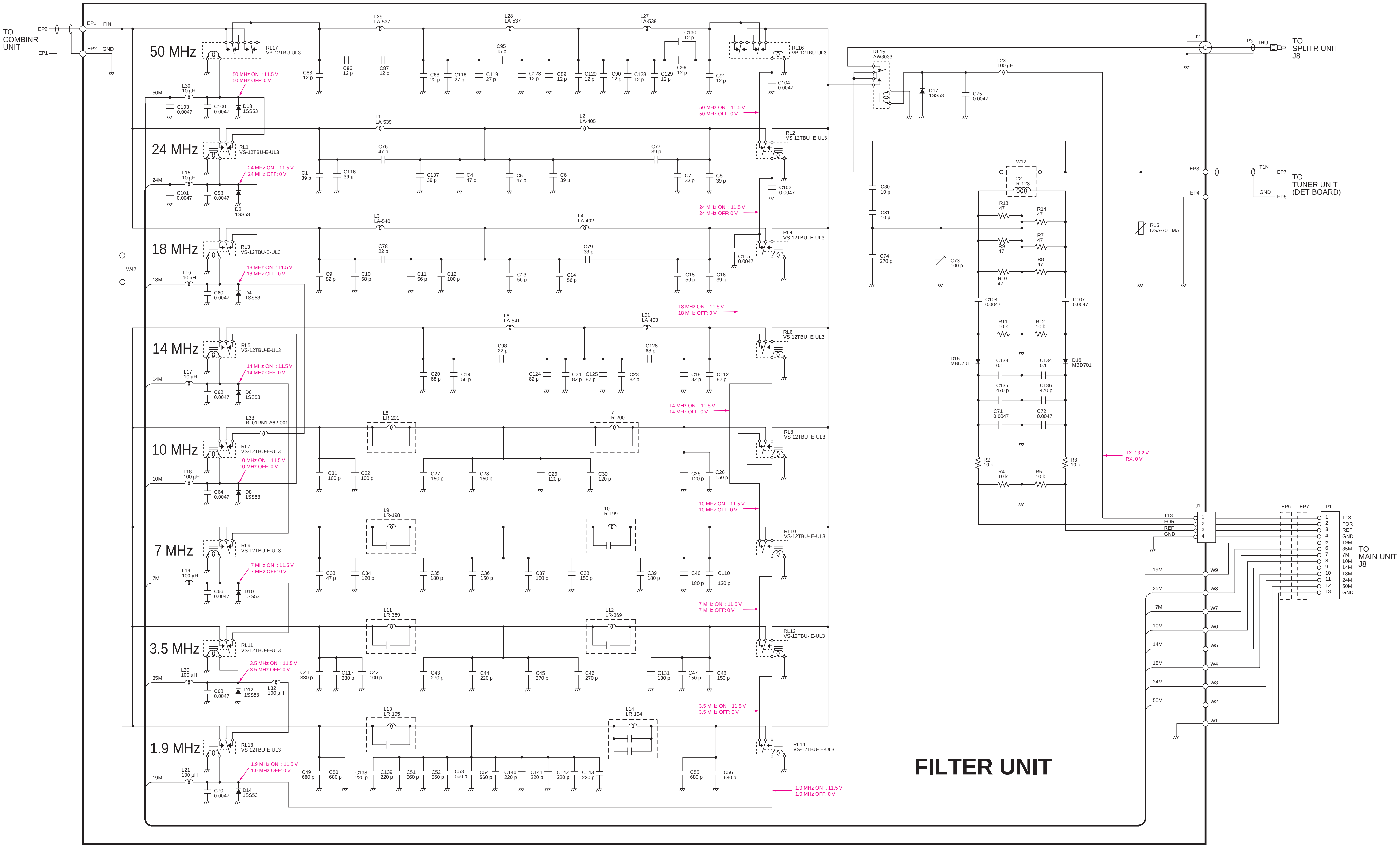
10-1 WIRING DIAGRAM



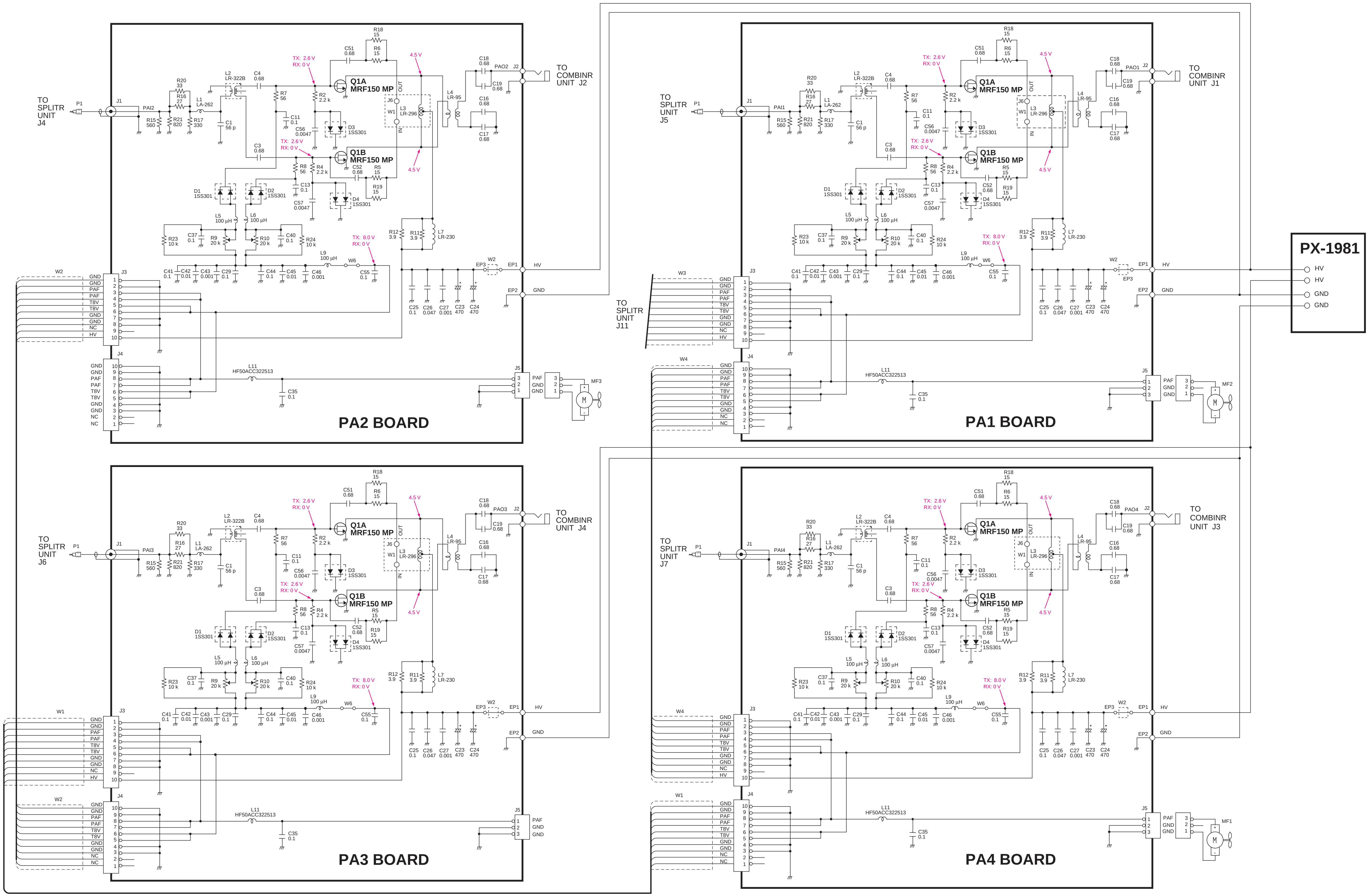
10-2 SPLITER, PA AND COMBINR UNITS



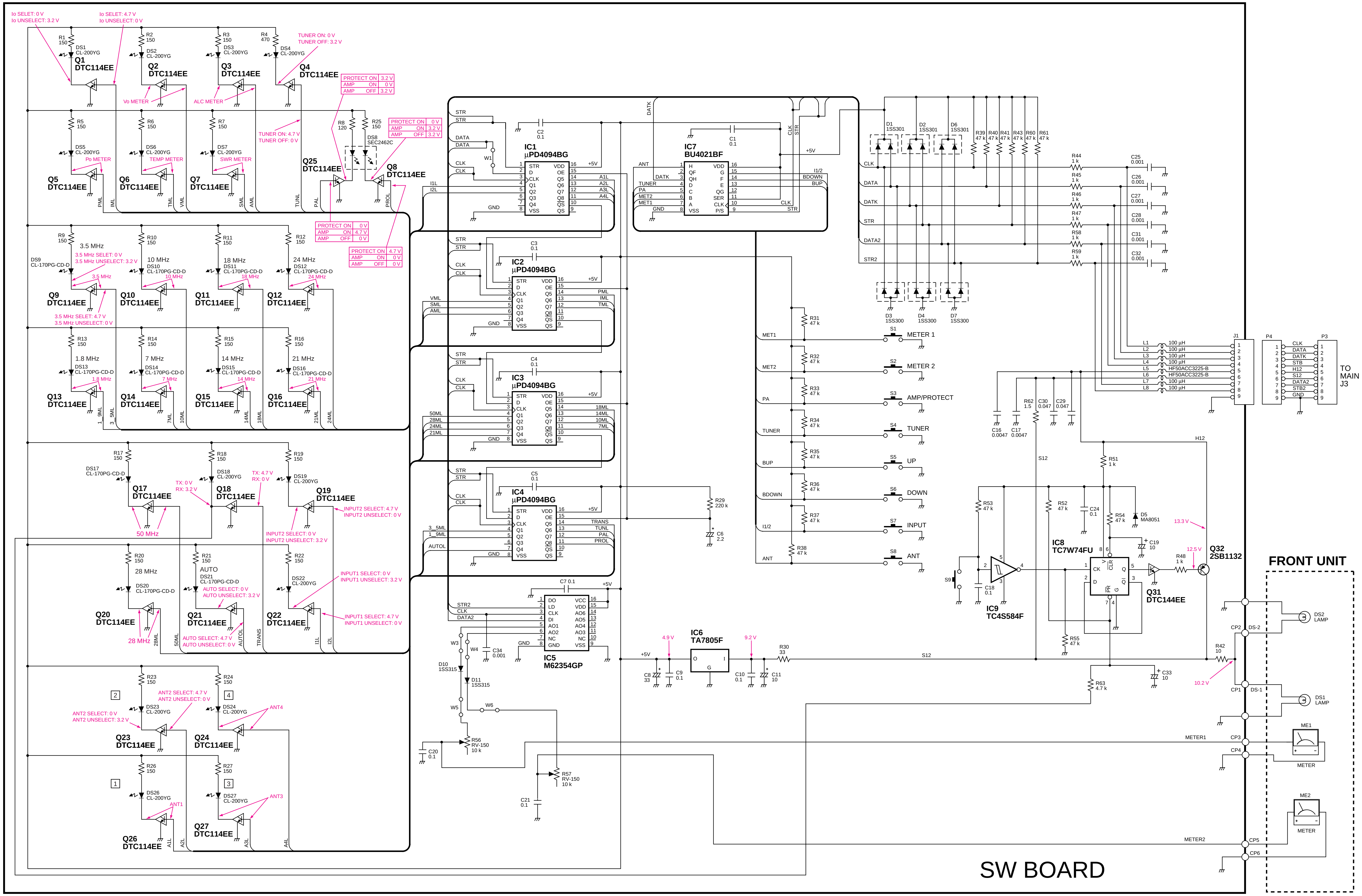
10-3 FILTER UNIT



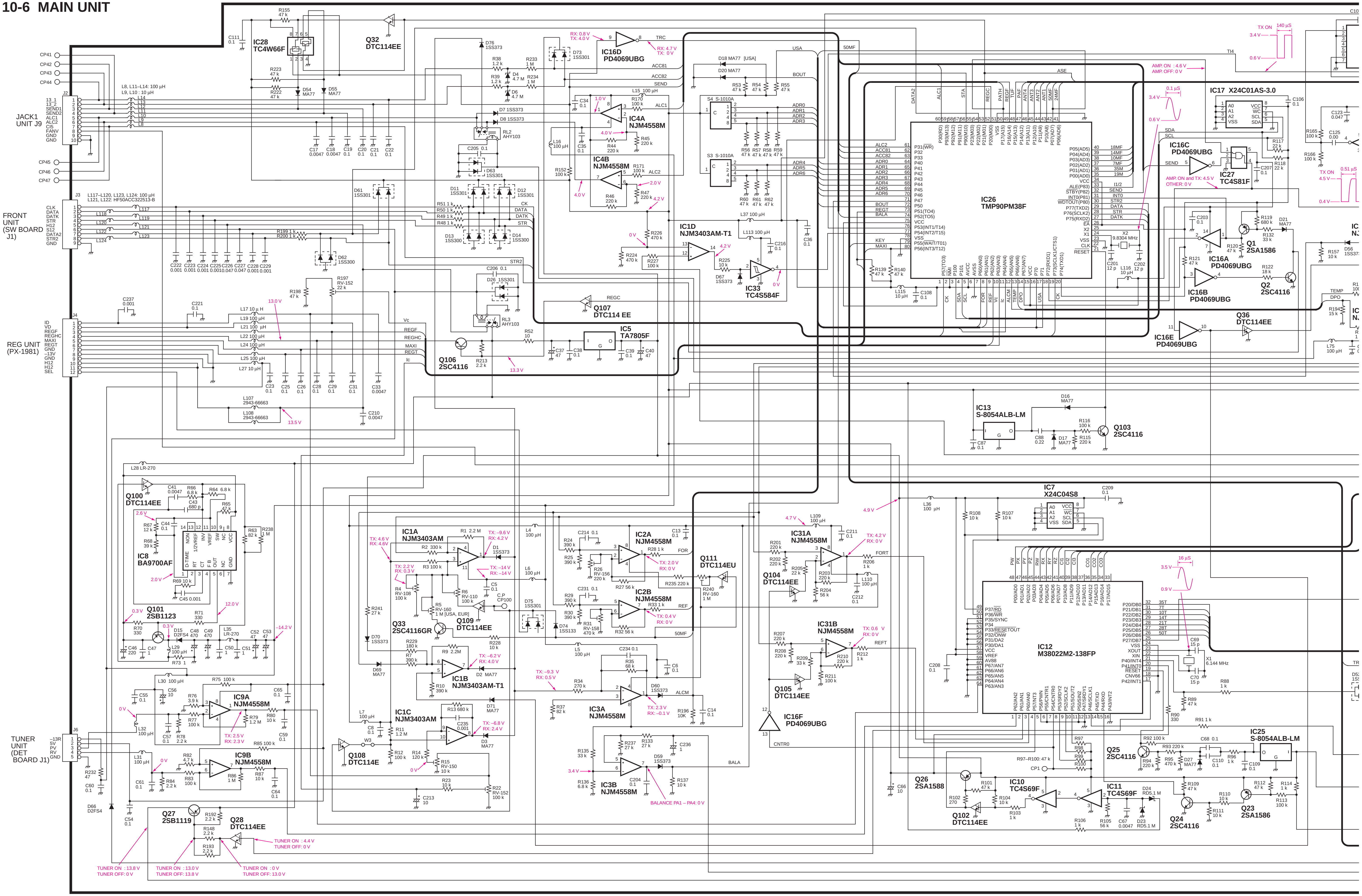
10-4 PA UNIT

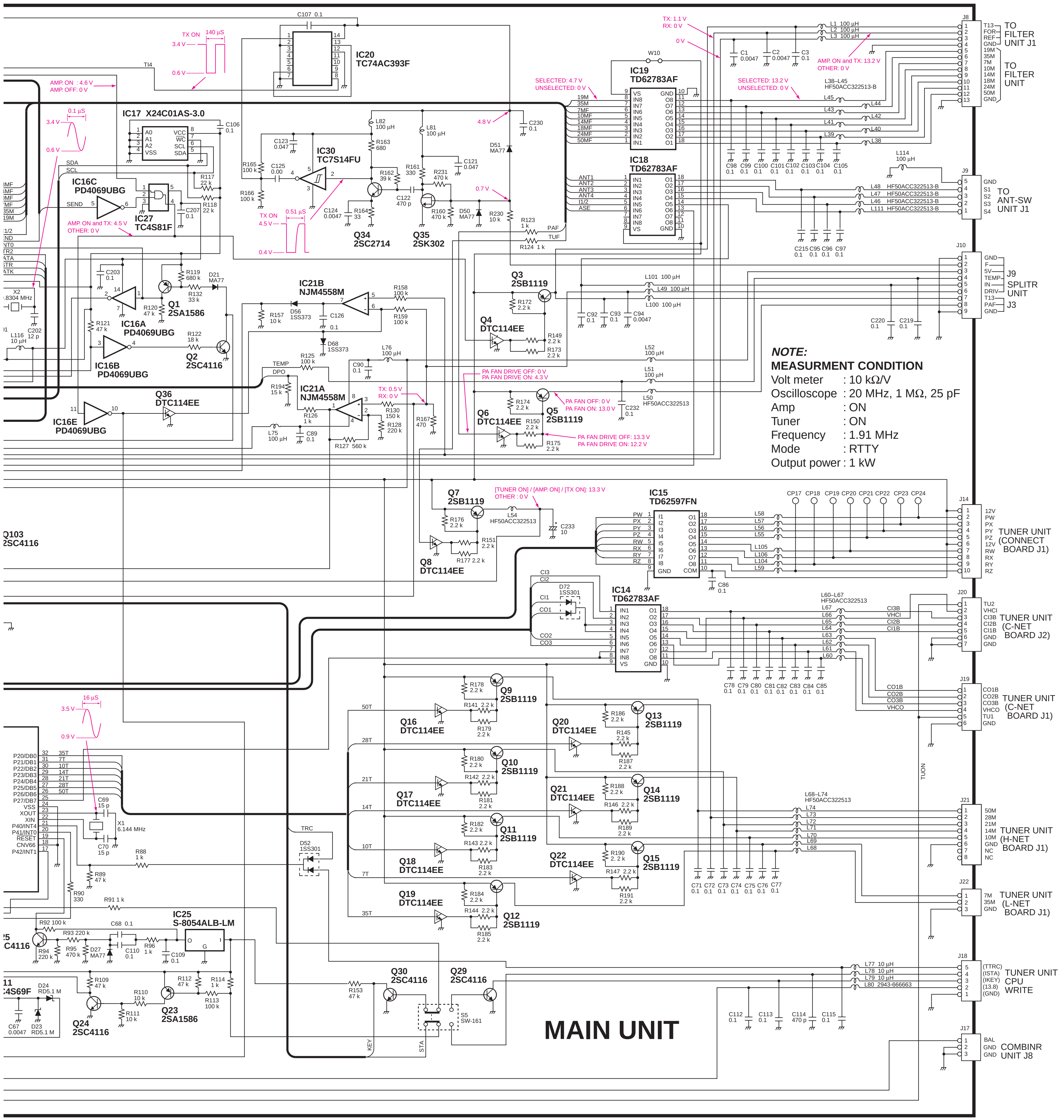

PA1 BOARD
PA2 BOARD
PA3 BOARD
PA4 BOARD
PX-1981
TO SPLITR UNIT J4
TO SPLITR UNIT J5
TO SPLITR UNIT J6
TO SPLITR UNIT J7
TO SPLITR UNIT J11
TO COMBINR UNIT J1
TO COMBINR UNIT J2
TO COMBINR UNIT J3
TO COMBINR UNIT J4
Q1A MRF150 MP
Q1B MRF150 MP
HV
GND

10-5 FRONT UNIT



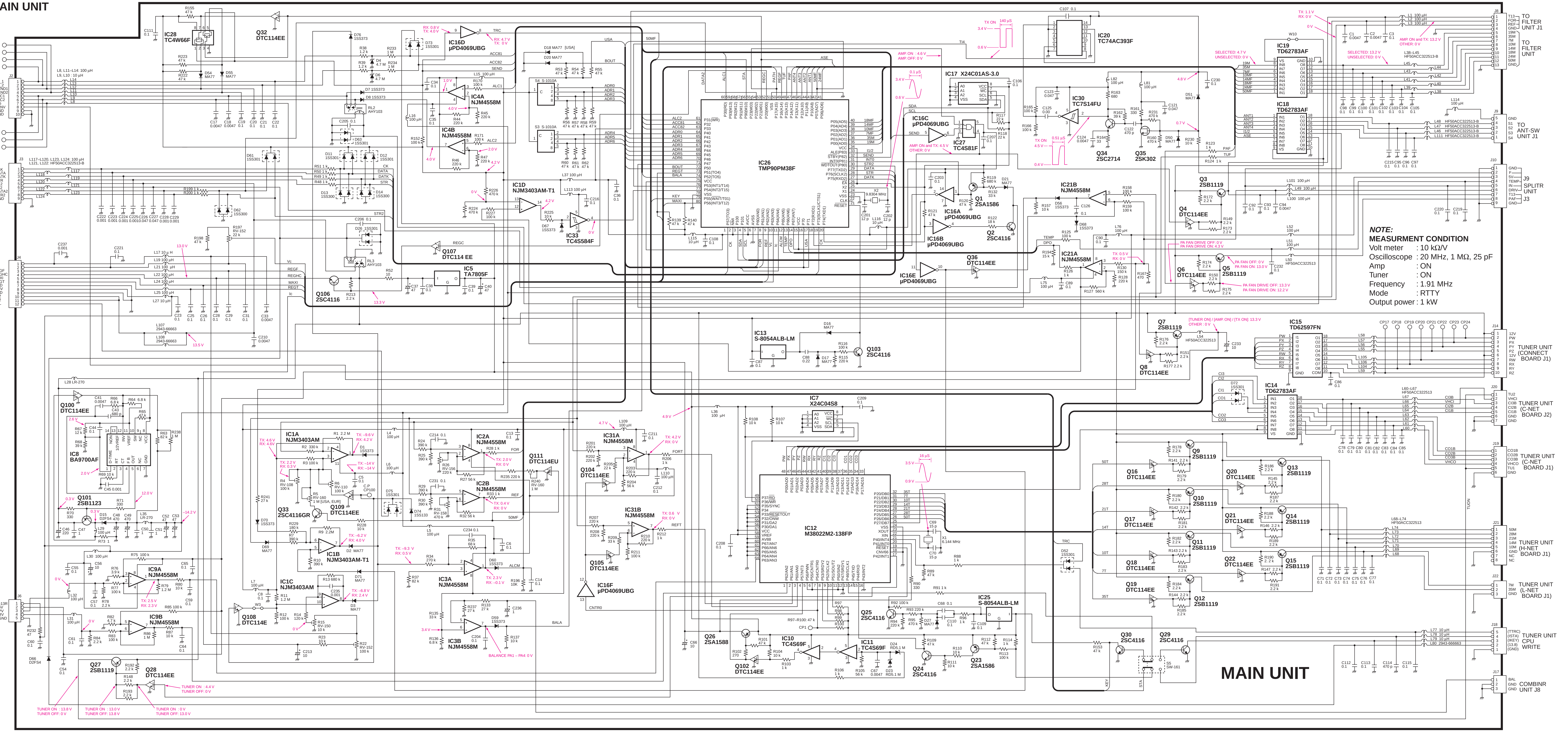
10-6 MAIN UNIT



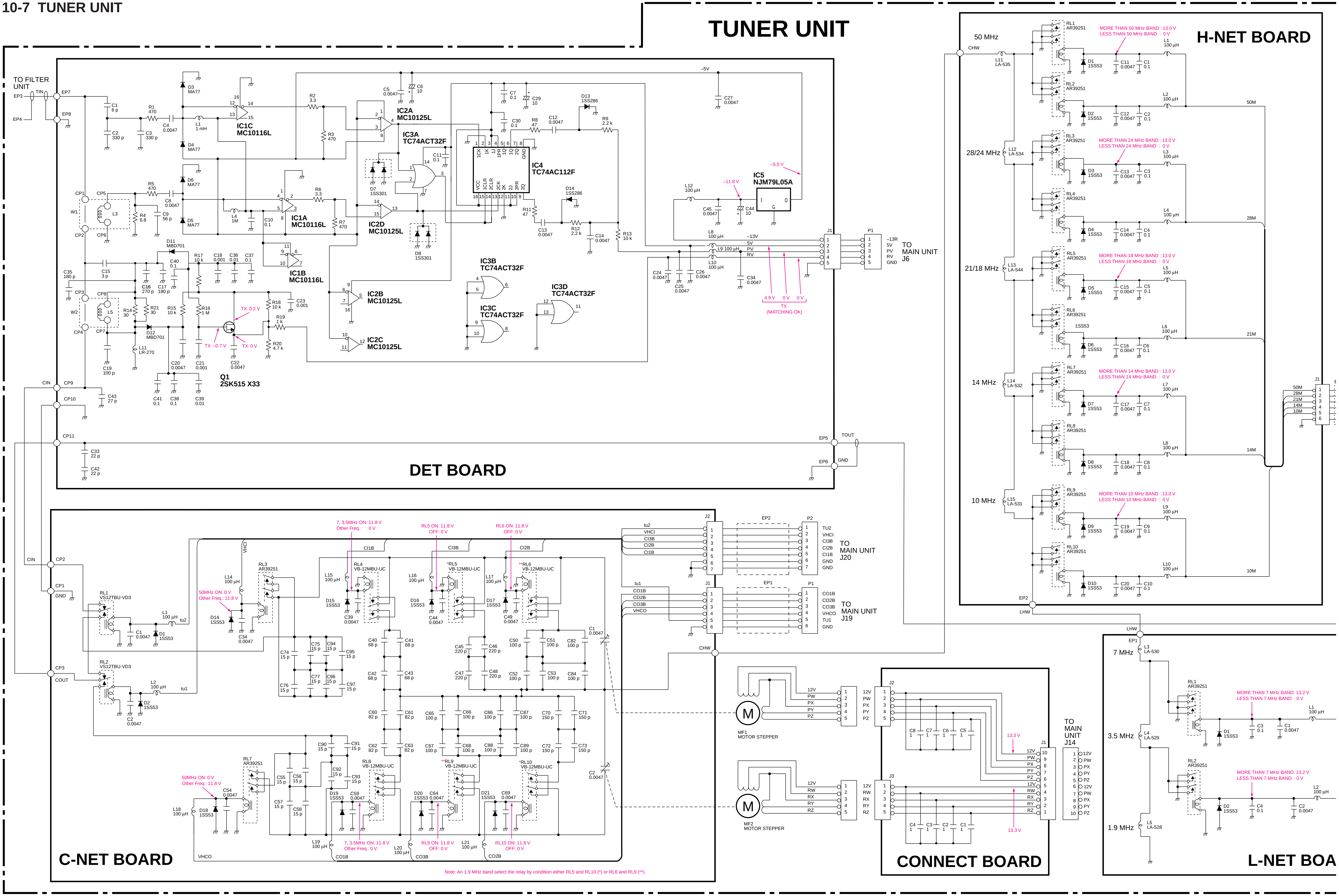


COMPLETE VIEW

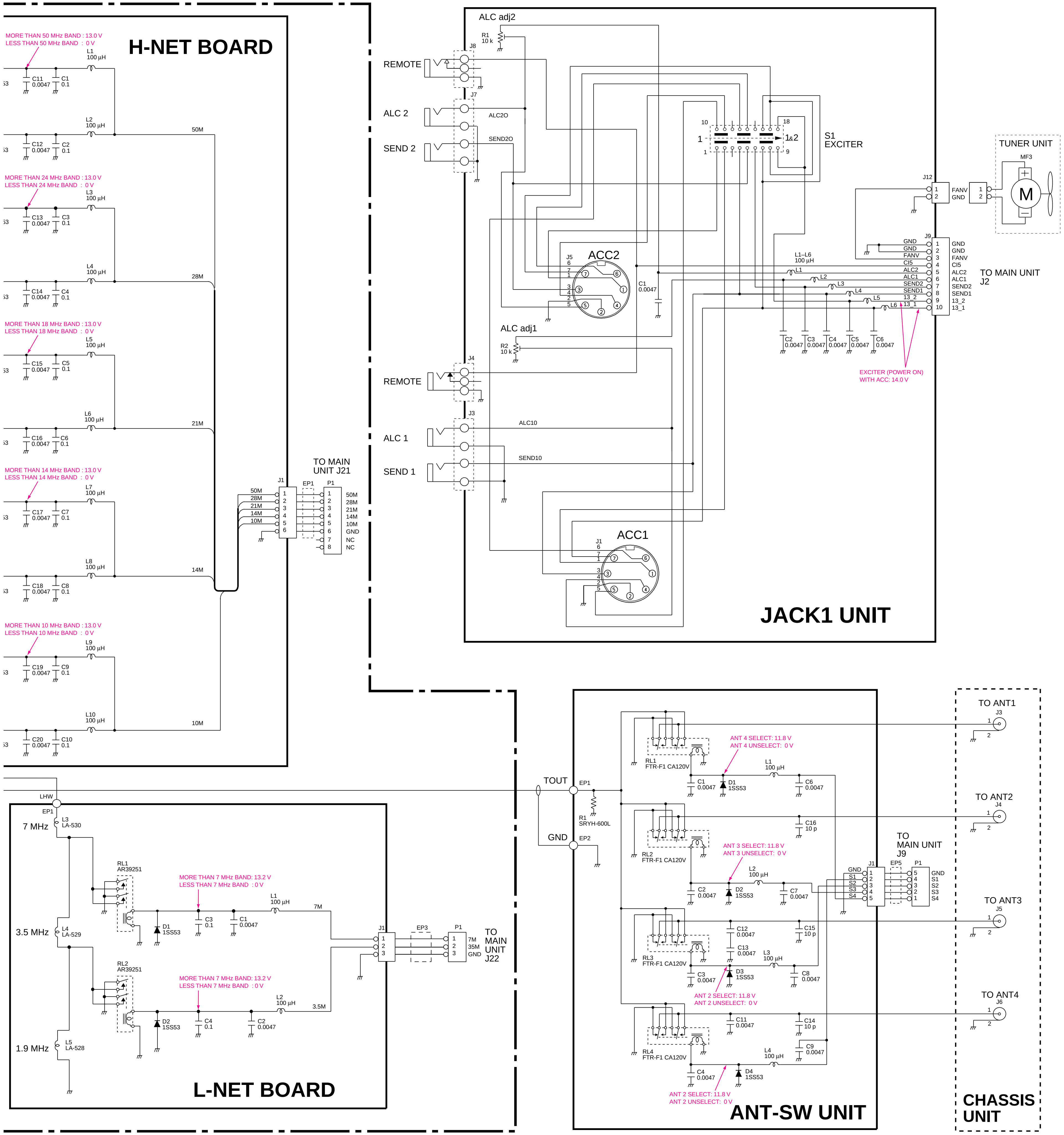
10-6 MAIN UNIT



10-7 TUNER UNIT

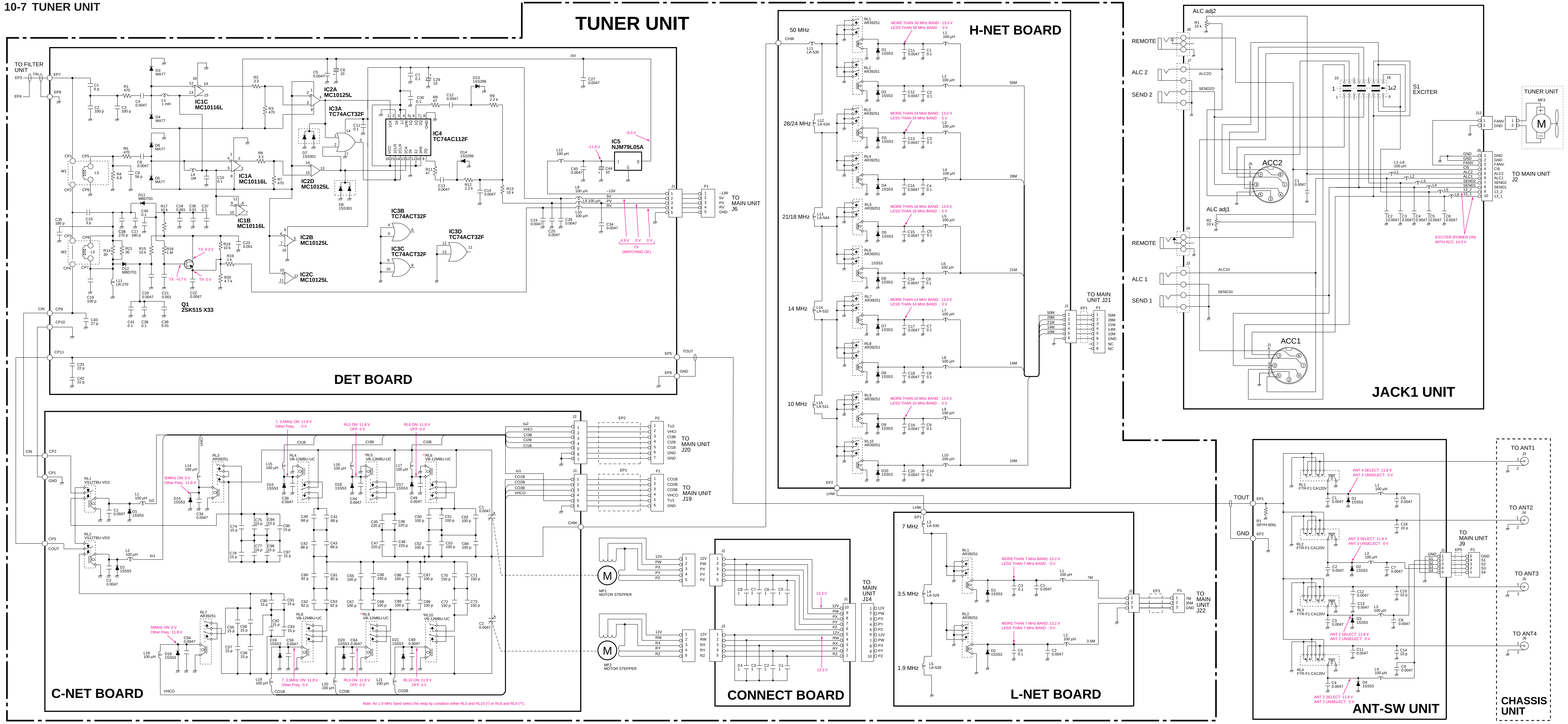


COMPLETE VIEW



COMPLETE VIEW

10-7 TUNER UNIT



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